DOCUMENT RESUME

ED 059 693 HE 002 863

TITLE	Proceedings of the Annual Meeting of the Western Association of Graduate Schools (12th, Seattle, Washington, March 1-3, 1970).
INSTITUTION	Idaho State Univ., Pocatello.
PUB DATE	70
NOTE	137p.
EDRS PRICE	MF-$0.65 HC-$6.58
DESCRIPTORS	*Curriculum Development; *Graduate Study; *Higher Education; *Labor Market; *Minority Groups

ABSTRACT

This is a report of the proceedings of the 12th annual meeting of the Western Association of Graduate Schools. The theme of the conference was changing patterns in graduate education. The first general session of the meeting presented 2 speeches and a discussion about perspectives on the problem of graduate education today. The second session dealt with the changing demands on graduate education with regard to ethnic minorities. The third session reviewed future content and approach in curricular offerings, and the fourth session discussed the job market for those with graduate degrees. The fifth and final session was a business meeting at which new officers were elected and various resolutions made. (HS)

ED 059693

PROCEEDINGS

Western Association of Graduate Schools

Seattle, Washington

HE 002 783

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

WESTERN ASSOCIATION OF GRADUATE SCHOOLS

PROCEEDINGS

Twelfth Annual Meeting

March 1-3, 1970

Seattle, Washington

Conference Theme

"CHANGING PATTERNS IN GRADUATE EDUCATION"

"PERMISSION TO REPRODUCE THIS
COPYRIGHTED MATERIAL HAS BEEN GRANTED
BY A.E. Taylor
Dean, Idaho State University
TO ERIC AND ORGANIZATIONS OPERATING
UNDER AGREEMENTS WITH THE U.S. OFFICE OF
EDUCATION. FURTHER REPRODUCTION OUTSIDE
THE ERIC SYSTEM REQUIRES PERMISSION OF
THE COPYRIGHT OWNER."

Copyright
Western Association of Graduate Schools
1970

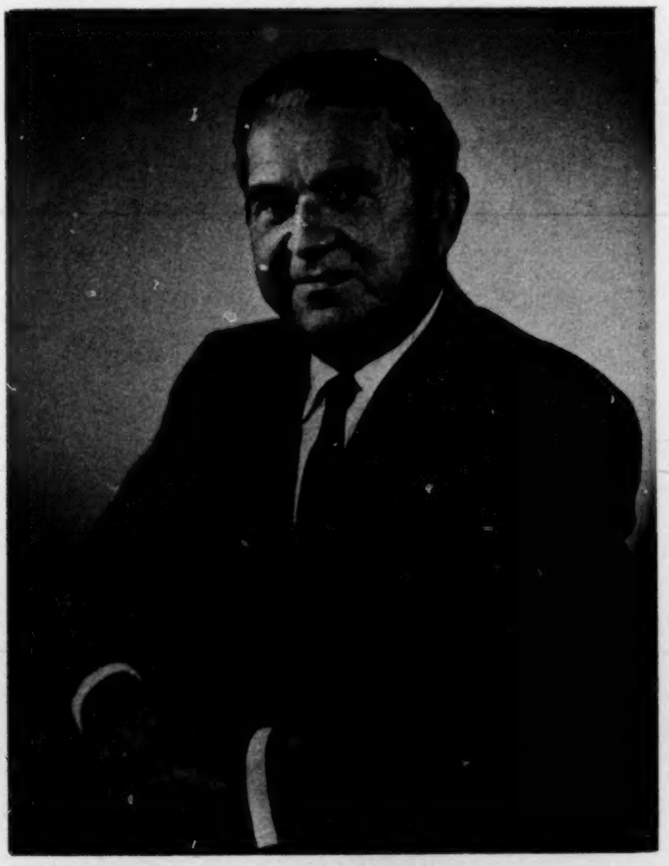
Published by
Idaho State University Press

DEDICATION

It is with particular pleasure and pride that I dedicate this volume to the man whose picture appears below. *GUSTAVE ARLT* was the honored guest on the occasion of the WAGS Twelfth Annual Meeting and it is more than appropriate that these proceedings be dedicated to him. All of us deans in the West present and past realize that it was from out of the West that Gus proceeded to high national office. His brilliant performance as President of the Council of Graduate Schools flowed from the principles and philosophies which he developed in the Deanship at the University of California at Los Angeles.

Corporately and individually we attach to this act of dedication our wish for a continued successful and active career, whether it consist of elder statesmanship, professional counseling, travel, loafing, or a combination thereof; whether it be implemented in the East, the Mid-west, or in the West; but preferably in the West, where our hearts lie and plenty of space is still available to exercise Gus' multiple talents.

George P. Springer
President, 1969-70



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Office of Education
Washington, D.C. 20202

January 22, 1970

On behalf of President Nixon, I am happy to send greetings to the Western Association of Graduate Schools.

As a vigorous advocate of excellence in graduate education, your organization is making a significant contribution to the lives of thousands of students who attend the schools you represent. I congratulate you on your success in stimulating a wider discussion of the problems and promises of the graduate schools within your region.

I take additional pleasure in joining with you to salute your founder, Dr. Gustave O. Arlt, for the distinguished service he has rendered the cause of graduate studies in this country. The example or his leadership should serve to inspire all who are committed to the progress of American education.

You have my best wishes for a pleasant and productive meeting.

/s/

James E. Allen, Jr.
Assistant Secretary for Education
and
U.S. Commissioner of Education

TABLE OF CONTENTS

MEMBER INSTITUTIONS ix

ASSOCIATION OFFICERS xi

PAST PRESIDENTS xii

DATES AND PLACES OF ASSOCIATION MEETINGS xii

INDIVIDUALS IN ATTENDANCE xiii

FIRST GENERAL SESSION

Presiding: Wytze Gorter, University of Hawaii
Theme: "Perspectives"

Introductory Remarks 1
Wytze Gorter, University of Hawaii

"Perspectives" 2
Gustave O. Arlt, President
Council of Graduate Schools in the United States

"Perspectives" 12
Mina Rees, City University of New York &
Council of Graduate Schools in the United States

Discussion 21

SECOND GENERAL SESSION

Presiding: George P. Springer, University of New Mexico
Theme: "Changing Demands Upon Graduate Education: The Graduate School and Ethnic Minorities"

Introductory Remarks 33
George P. Springer, University of New Mexico

"Introductory Remarks: Graduate Education and Ethnic Minorities" 34
Phyllis Watts, Fresno State College

"Minorities and Graduate Deans Communicate" 36
Wendell H. Bragonier, Colorado State University

"Philosophy, Objectives and Guidlines for Minority Education Programs" 39
Eliezer Risco-Lozada, Fresno State College

"Philosophy, Objectives and Guidlines for Minority Education Programs" 42
Ysuf Kaurouma, University of Colorado

"Graduate Opportunity and Support Programs" 43
Hazel Love, University of California, Los Angeles

"The American Indian Student" 44
Michael Trujillo, Student, University of New Mexico

Respondents and Discussion 47

THIRD GENERAL SESSION

Presiding: Otis H. Shao, University of the Pacific
Theme: "Changing Content and Approaches"

Introductory Remarks
Otis H. Shao, University of the Pacific 57

"The Future Content of Graduate Education" 58
Charles T. Lester, U.S. Office of Education

"Research and Radicalism" 62
Paul Sultan, Simon Fraser University

"The Challenge of Change in Graduate Education Today" 75
Richard A. Nevé, Central Washington State College

"Projected Plans for Changes in the Graduate Record Examinations" 78
Richard Burns, Educational Testing Service

FOURTH GENERAL SESSION

Presiding: Robert H. Bruce, University of Wyoming
Theme: "Changing Demand for the Product of Graduate Education"

Introductory Remarks 85
Robert H. Bruce, University of Wyoming

"The Graduate Marketplace: Current Status and Future Projections" 85
Wayne C. Hall, National Research Council

"The Graduate School-Industry Partnership" 103
Philip B. Swain, The Boeing Company

"Changing Demands of the Colleges: The Doctor of Arts Degree" 110
Joseph L. McCarthy, University of Washington

"A Canadian View on the Changing Demand" 113
A. G. McCalla, University of Alberta

FIFTH GENERAL SESSION

Presiding: George P. Springer, University of New Mexico
President, Western Association of Graduate Schools

Business Meeting 117

CONSTITUTION of the Western Association of Graduate Schools 121

APPENDIX A 125

MEMBER INSTITUTIONS
of
WESTERN ASSOCIATION OF GRADUATE SCHOOLS

ALASKA

University of Alaska

ARIZONA

Arizona State University
Northern Arizona University
University of Arizona

CALIFORNIA

California State College, Dominguez Hills
California State College, Fullerton
California State College, Hayward
California State College, Long Beach
California State College, Los Angeles
California State Polytechnic College, Kellogg-Voorhis
California State Polytechnic College, San Luis Obispo
Chico State College
Claremont Graduate School
College of the Holy Names
Fresno State College
Humboldt State College
Immaculate Heart College
Loma Linda University
Loyola University of Los Angeles
Mount St. Mary's College
Occidental College
Sacramento State College
San Diego State College
San Fernando Valley State College
San Francisco College for Women
San Francisco State College
San Jose State College
Stanford University
United States International University
United States Naval Postgraduate School
University of California at Berkeley

CALIFORNIA *(cont.)*

University of California, San Francisco Medical Center
University of California, Davis
University of California, Irvine
University of California at Los Angeles
University of California at Riverside
University of California, San Diego
University of California at Santa Barbara
University of the Pacific
University of Redlands
University of San Francisco
University of Southern California

COLORADO

Adams State College
Colorado School of Mines
University of Northern Colorado
Colorado State University
University of Colorado
University of Denver
Western State College

HAWAII

University of Hawaii

IDAHO

Idaho State University
University of Idaho

MONTANA

Montana State University
University of Montana

NEVADA

University of Nevada, Reno
University of Nevada, Las Vegas

NEW MEXICO

New Mexico Institute of Mining
& Technology
New Mexico State University
University of New Mexico
Western New Mexico University

OREGON

Oregon State University
Portland State University
University of Oregon
University of Portland

UTAH

Brigham Young University
University of Utah
Utah State University

WASHINGTON

Central Washington State College
Eastern Washington State College
Gonzaga University
Pacific Lutheran University
University of Puget Sound
University of Washington
Washington State University
Western Washington State College

WYOMING

University of Wyoming

CANADA

ALBERTA

University of Calgary

BRITISH COLUMBIA

University of British Columbia

OFFICERS for 1969 - 1970

GEORGE P. SPRINGER *University of New Mexico*	President
PHILIP M. RICE *Claremont Graduate School*	President-Elect
WYTZE GORTER *University of Hawaii*	Past President
ALBERT E. TAYLOR *Idaho State University*	Secretary-Treasurer

Additional Members of the Executive Committee

HAROLD F. RYAN *Loyola University of Los Angeles*	Member-at-Large
WENDELL H. BRAGONIER *Colorado State University*	Member-at-Large

OFFICERS for 1970 - 1971

PHILIP M. RICE *Claremont Graduate School*	President
WILLIAM J. BURKE *Arizona State University*	President-Elect
GEORGE P. SPRINGER *University of New Mexico*	Past President
ALBERT E. TAYLOR *Idaho State University*	Secretary-Treasurer

Additional Members of the Executive Committee

WENDELL H. BRAGONIER *Colorado State University*	Member-at-Large
HAROLD F. RYAN *Loyola University of Los Angeles*	Member-at-Large

PAST PRESIDENTS OF THE ASSOCIATION

Year	*Dean*	*Institution*
1958-59	Stuart Hazlet	Washington State
1959-60	Herbert Rhodes	University of Arizona
1960-61	Luther Lee	Claremont Graduate School
1961-62	Robert H. Bruce	University of Wyoming
1962-63	Milton Kloetzel	University of Southern California
1963-64	James Brown	San Jose State
1964-65	Henry P. Hansen	Oregon State
1965-66	George C. Feliz	San Francisco State
1966-67	Thomas D. O'Brien	University of Nevada
1967-68	Wesley P. Lloyd	Brigham Young University
1968-69	Wytze Gorter	University of Hawaii
1969-70	George P. Springer	University of New Mexico
1970-71	Philip M. Rice	Claremont Graduate School

DATES AND PLACES OF ASSOCIATION MEETINGS

(Preliminary planning meetings were held at Sante Fe, New Mexico, in 1957 and at Denver, Colorado, in 1958.)

1st	March 29, 1959	Lake Arrowhead, California
2nd	February 29, 1960	Berkeley, California
3rd	February 27, 1961	Phoenix, Arizona
4th	March 5, 1962	San Diego, California
5th	February 25, 1963	Reno, Nevada
6th	February 24, 1964	Albuquerque, New Mexico
7th	March 2, 1965	San Francisco, California
8th	February 28, 1966	Tucson, Arizona
9th	March 6, 1967	Honolulu, Hawaii
10th	March 4, 1968	Denver, Colorado
11th	March 3, 1969	Las Vegas, Nevada
12th	March 2, 1970	Seattle, Washington
13th	1971	Newporter Beach, California *(planned)*
14th	1972	Phoenix, Arizona *(planned)*

ATTENDEES

Twelfth Annual Meeting
of
WESTERN ASSOCIATION OF GRADUATE SCHOOLS
Seattle, Washington
March 1-3, 1970

ARLT, Gustave O.	Council of Graduate Schools
BEHM, Roy K.	Eastern Washington State College
BETZ, Mathew J.	Arizona State University
BRAGONIER, Wendell H.	Colorado State University
BROWN, Giles T.	California State College, Fullerton
BROWN, James W.	San Jose State College
BRUCE, Robert H.	University of Wyoming
BURKE, William J.	Arizona State University
BURNS, Richard L.	Educational Testing Service
BUSCH, Jay M.	Central Washington State College
COWGILL, James J.	Seattle University
CROWE, Lawson	University of Colorado
DENEAU, Doris M.	University of California, Irvine
DYSON, Mae F.	University of California, Berkeley
ESHELMAN, James N.	Council of Graduate Schools
FISCHER, Robert B.	California State College, Dominguez Hills
GAFFNEY, Louis	Seattle University
GALLAHAR, Joseph	Claremont Graduate School
GALLEGOS, Arnold M.	Washington State University
GARDNER, E. J.	Utah State University
GOERING, Kenneth J.	Montana State University
GOODMAN-MALAMUTH, Leo	California State College, Long Beach
GORTER, Wytze	University of Hawaii
HALL, Wayne C.	National Research Council
HATCHETT, S. P.	National Institute of Health
HEWITT, Robert	University of California, Riverside
HOLMES, Charles A.	New Mexico Institute of Mining & Technology
JACKSON, Mel	University of Idaho
JOHNSON, Frank	University of Utah
JORDAN, A. R.	Colorado School of Mines
JUSTICE, Keith E.	University of California, Irvine

KEHOE, Joseph A.	University of Portland
KELLY, William C.	National Research Council
KENT, Leonard J.	Chico State College
KERSHAW, Joseph A.	Ford Foundation
KING, James F.	University of California, Berkeley
KIRK, James H.	African-American Institute
KITZHABER, Albert R.	University of Oregon
KOPELMAN, Jay B.	University of Colorado
KRAMER, Howard D.	National Science Foundation
LEMME, Maurice M.	San Diego State College
LESTER, Charles T.	Office of Education
LEVINE, Gary R.	Calif. State Colleges-Office of the Chancellor
LLOYD, Wesley	U. S. International University
LUCKI, Emil	San Fernando Valley State College
MAGOUN, H. W.	University of California, Los Angeles
MAURER, Robert L.	Calif. State Poly College, Kellogg-Voorhis
MAY, William W.	University of Southern California
MAYO, Charles G.	University of Southern California
MCCALLA, A. G.	University of Alberta
MCCARTHY, Joseph L.	University of Washington
MCCRONE, John	University of the Pacific
MCMAHON, Catherine	San Francisco College for Women
MCMURRIN, Sterling M.	University of Utah
MCNITT, Robert W.	Naval Postgraduate School
MERRITT, C. B.	University of Arizona
MILLER, Wilbur C.	University of Denver
MOE, Richard	Pacific Lutheran University
MOSES, Lincoln E.	Stanford University
MOYE, Anthony J.	California State College, Los Angeles
NEVÉ, Richard A.	Central Washington State College
NYMAN, C. J.	Washington State University
O'BRIEN, T. D.	University of Nevada
PAGE, J. B.	Council of Graduate Schools
PATTERSON, Ernest	University of Colorado
RAE, K. M.	University of Alaska
RAGIN, James F.	Colorado State University
REES, Mina	City University of New York
REYNOLDS, Art	Colorado State College
RHODES, Herbert D.	University of Arizona
RICE, Philip M.	Claremont Graduate School
RIDDLE, Chauncey C.	Brigham Young University
RIPLEY, Helen	U. S. Office of Education
ROOSE, Kenneth D.	American Council on Education
ROSS, J. Alan	Western Washington State College
RYAN, E. Dean	University of California, Davis
RYAN, Harold F.	Loyola University of Los Angeles

SHACKLETON, Frederick G.	Azusa Pacific College
SHAO, Otis H.	University of the Pacific
SLABAUGH, W. H.	Oregon State University
SNYDER, Pat O.	Western Interstate Commission for Higher Education
SPRINGER, George P.	University of New Mexico
SRIVASTAVA, Lalit M.	Simon Fraser University
STAUFFER, J. Paul	Loma Linda University
STEWART, John M.	University of Montana
TAYLOR, Albert E.	Idaho State University
THOMPSON, Emmett C.	Sacramento State College
THOMPSON, Merrell E.	New Mexico State University
TURNER, John	Claremont Graduate School
UMBACH, William E.	University of Redlands
WATTS, Phyllis Welch	Fresno State College
WHITFIELD, R. P.	Eastern Washington State College
ZAUCHENBERGER, Herwig G.	Claremont Graduate School

Monday, March 2, 1970

OPENING OF THE TWELFTH ANNUAL MEETING: George P. Springer, President

FIRST GENERAL SESSION

Theme: "Perspectives"

Presiding: Wytze Gorter, University of Hawaii

INTRODUCTORY REMARKS

Wytze Gorter
Dean, Graduate Division
University of Hawaii

It's a great deal of pleasure to have the privilege to open this Twelfth Annual Meeting of Western Association of Graduate Schools and doubly so because of the opportunity to introduce two very distinguished people who basically as usual need no introduction. The theme of the meetings this year as you know is "Changing Patterns in Graduate Education." As you will notice in each of the sessions some element of the change is being discussed. At this particular session we thought it might be a very good idea to have two people with distinguished careers in graduate education provide a perspective for us or perhaps a group of perspectives or even more so that we would have a background for further discussion during the course of the day and tomorrow. The notion behind this morning's program is that each of these two speakers will speak for some period of time. Gustave has assured me he would have thirty-five minutes worth of speech and I don't know what Mina has but presumably as an ex-college professor hers would run somewhere around fifty minutes or less. Each speaks, then we'll have a break and then afterward a mixture of discussion and questions from the floor as well as what I'm sure will be some discussion between the two participants. I think it might be best if briefly I introduce both of the speakers or say a few words about them. I think you all know Mina Rees very well. I find Mina Rees everywhere I go. She at the moment is dean or doctor of everything in graduate education and the program identifies her quite clearly as President of the Graduate Division of the City University of New York.

She is also as you know the President of the Council of Graduate Schools in the United States and a variety of other positions that are equally praiseworthy and well deserved on her part. Gustave Arlt I can introduce as a friend. I won't say an old friend but a friend of long standing and as you also noted, this particular annual meeting is dedicated to Gustave, one of our one time western deans. He has one unfortunate feature in his career--a very personal one where I'm concerned. Some of you may have known that some of us get into graduate education by playing billiards. I met Gustave many years ago at UCLA and became well acquainted with him at the faculty club as a result of discovering that each of us played billiards. I didn't think much of this until one summer I had a call from the chairman of the committee on committees asking me if I would be a member of the Graduate Council and not only that, but would I also be chairman of the Graduate Council, so it didn't take me long to discover that whatever qualities I had had nothing to do with graduate education, but were Gustave's estimates of me as a billiard player. Apparently there is some carry over from the green fields of play to being a graduate dean. At UCLA, however, Gustave made a very many good decisions as well and he as you know was the first President of the Council of Graduate Schools. When Gustave left he left in the middle of my first year on the Graduate Council and my chairmanship year at that, so he not only managed to get me involved in graduate work quickly but very deeply, very soon. I need not relate the tremendous job he has done as President of the Council of Graduate Schools. I can only say that it is a very sad occasion that people do seem to get on in years and feel that they should do other things. I can think of nothing better for us at this point than to have him with us. I might point out that in the last four years we have invited him four times and finally this year he decided to favor us with his presence. We are delighted indeed to have him here and will begin the program then by asking Gustave if he will give us his perspectives.

PERSPECTIVES

Dr. Gustave O. Arlt
Persident, Council of Graduate Schools
in the United States

Our program for this morning's session lists the topic as "Perspectives." It continues to say that Dean Rees and I are "Panelists." She and I discussed the matter at some length and finally concluded that we were billed in a brother and sister juggling act to toss these perspectives--whatever they may be--back and forth gracefully like illuminated dinner plates. It was not until last week that I was informed that something of much more heroic proportions was expected of us. So I set out in my usual methodical manner to ascertain what kind of "Perspectives" might be intended. My old friend, Noah Webster, gave me an array of definitions, the first of which was "an optical glass, as a telescope." That didn't seem appropriate. The next was "the technique or process of representing on a plane or curved surface the spatial relation of objects as they might appear to the eye." That reminded me unpleasantly of a course in mechanical drawing I once took as a freshman when I still had the misguided notion that I wanted to be an engineer. This was followed by "the technique of adjusting the apparent sources of sounds (as on a radio program) into a natural-seeming and integrated whole." Although I recognized that this was a complicated definition of stereophonic music, there still wasn't much virtue in it for me and you. Finally, half-way down the page, when Webster was obviously running out of ideas, I found this: "the aspect in which a subject or its parts are mentally viewed; the capacity to view things in their true relations or relative importance." That seemed to fill the bill, for if there is anything we desperately need today, it is the capacity to view our problems in their true relations and relative importance.

Not that this is a new and unprecedented need of our times. Indeed the entire history of graduate education in the United States consists of an unending effort to view things in their true relations and relative importance. For the problems that vex us today, the ills of which we complain, are not the symptoms of gerontomorphosis, not the syndrome of senescense, they are congenital. They were hatched with the embryo and were born with it. They were recognized and discussed and debated a century ago, even before the formal establishment of the first graduate school.

For a century and half before the beginnings of graduate education, American colleges had been patterned on the model of the British liberal arts college with its aristocratic, Graeco-Roman classical tradition, its emphasis on formal teaching, strict preceptorship, and rote learning. The importation of the graduate concept from the German university brought freedom of thought, learning, and inquiry, emancipation from formal teaching, scientific and philological approach to research, scholarly thoroughness--in short, the ingredients of professionalism. The antithetical character of the two educational philosophies and systems is at once apparent. They are, if not actually diametrically opposite, at least incompatible within a single structure. Here, long before the establishment of the first graduate school, even before the initiation of any graduate work, lie the beginnings of the never-ending controversies--learning versus teaching, research versus preservation of knowledge, professionalism versus liberal education, and, to use a horrid modern term, contemporary relevance versus academic traditionalism.

About the year 1825, George Ticknor, Edward Everett, George Bancroft, and Joseph Green Cogswell returned from Göttingen to Harvard full of enthusiastic plans for curricular reform. Their chief recommendations stressed the need for persons with "advanced," that is, graduate education. They provoked a great deal of animated discussion, much of it favorable to drastic reforms, liberalizing the classics-based curriculum, expanding existing universities--but no action. Even the modest proposal to establish an advanced seminar--then called "seminary"--at Harvard failed. The conservative forces in the New England colleges rallied in support of tradition and in 1828 the Yale faculty issued its famous apodeictic report defending the "dead languages" as the wellspring of all learning, recognizing the need for improvement in various areas but placing the greatest emphasis on "the discipline and furniture of the mind." Since Yale provided so many presidents and teachers for the new colleges in the South and West, the Yale Report was instrumental in delaying curriculum reform for at least thirty years. Of the approximately seventy-five colleges in existence before 1840, thirty-six had presidents from Yale, twenty-two from Princeton, and eight from Harvard.

Yale's adamant stubbornness in defense of the classical British pattern makes it all the more incongruous that Yale instituted the first Ph.D. program, awarded the first Ph.D. degrees, and established the lasting characteristics of the doctorate. But the battle was bitter and bloody. The document which led to the establishment of this program by action of the Yale Corporation on July 24, 1860, originated not in the general faculty of the University but in the faculty of the newly founded Sheffield Scientific School. This fact significantly emphasizes the continuing academic schism between the British classical tradition and the German ideal of scientific research. The Memorial from the Sheffield faculty proposed that "in accordance with the usage of German universities the degree of Doctor of Philosophy be conferred on those students who successfully pursued a higher course of scientific study." It added, however, that "in accordance with the practices of foreign universities, this same degree may hereafter with propriety be conferred for high attainments in Mathematics or Philology or such other branches as may be taught in the Department of Philosophy or the Arts." With this language Yale University cemented the Ph.D. into place as the capstone of American higher education, if not forever, at least for more than a century. It settled two questions--that graduate work would be validated by a degree and that this degree would be the Ph.D. in all fields.

The Memorial also established three other lasting characteristics of Ph.D. programs. It provided that "this degree be conferred on students of the Scientific School on the following conditions:

> "1. That they shall have pursued their studies for the year next preceding their examination for the Degree in this Institution.
>
> "2. That they shall have passed a satisfactory examination in all of the studies in the above named scientific course.
>
> "3. That they shall present a written thesis which shall be approved by the Faculty giving the results of an original chemical or physical investigation."

These requirements--residence, comprehensive examinations, and an original thesis--these three pillars of graduate study stand to this day, although they are beginning to show signs of erosion.

The battles that rocked the Yale faculty before 1861 were fought all over again in a dozen universities over the next fifteen years. Most of them established graduate programs of some sort but only three awarded earned Ph.D.'s before 1876--Pennsylvania in 1871, Harvard in 1873, and Columbia in 1875. What these pioneers chiefly lacked was an organizational pattern in which graduate education could flourish. The undergraduate colleges with their long-established tradition and conservative faculty resisted the superimposition of an amorphous body of teachers and students engaged in an enterprise that was foreign to them. It was the lack of an appropriate organization within the university, more than anything else, that retarded the more rapid acceptance of graduate work. For the many older established colleges of our own time who are moving into the graduate area, there are valuable lessons to be learned here.

Finally in 1876 Johns Hopkins led the way to a new pattern by establishing the first strictly graduate school. The level of scholarship, the emphasis on the freedom of research and teaching, the excellence of the doctoral programs were soon copied by other universities, both older ones and those newly founded. Clark University and the University of Chicago boldly followed the example of Johns Hopkins in organizing a strictly graduate environment. Graduate work began to take root in half a dozen strong private colleges in the East and an equal number of state universities in the Mid-West and Far-West. The development was not easy. In the established institutions it took years to overcome faculty resistance to the spending of university funds on such luxuries as research libraries and laboratories. In the three new institutions, Johns Hopkins, Clark, and Chicago, the inspired vision of a strictly graduate university soon faded before the fiscal realities, and they had to add undergraduate colleges. It might be added that more recent efforts in the same direction also failed. One of the newer examples is the University of California at San Diego, which was planned as a graduate school of science and engineering, but which began to add undergraduate colleges after only two years. The one successful exception is the Rockefeller University, and it owes its success to its exceptional character and circumstances--small size, restricted field, and ample funds.

By the year 1900 the problems that had existed from the beginning and that plague us in aggravated form today had become so acute as to necessitate some kind of concerted action. The preeminence, then as now, of the natural sciences was a source of irritation to the humanists and the social scientists. They had already forgotten that the graduate school was created under pressure of the sciences, and they ignored the fact that they lived in an increasingly scientific and technological age. Then as now, the endless controversy over the relative emphasis on teaching and research divided the academic community and erupted into the Battle of the Giants--Daniel Coit Gilman, who insisted that the preparation of college teachers was the primary task of the graduate school, and William Rainey Harper, who announced that promotion would depend "more largely" on research productivity than on teaching. Then as now, the question of the university's responsibility for "service to the community" was debated and again it was Harper who said in 1895, "the most marked characteristic in the development of university life has been the adaptation of its methods and training to the practical problems of the age in which we live"--a remarkable statement coming from a man whose doctoral dissertation was "A Comparative Study of the Prepositions in Latin, Greek, Sanskrit, and Gothic." Most ominous, however, to the hegemony of the prestige institutions was the rapid and uncontrolled rise of a large number of new competitors in the graduate area. In 1900, fourteen universities awarded 88 percent of all doctorates, but already thirty-seven others were engaged in doctoral programs, and almost 150 were actively preparing to enter the field.

To meet these emergencies, the Presidents of the Big Five, Harvard, Columbia, Johns Hopkins, Chicago, and California, invited the Presidents of the slightly Less Big Nine to join them in the establishment of The Association of American Universities. While the name of the organization probably sounded less arrogant in 1900 than it would today, it clearly gave notice that the established institutions were prepared to consolidate and defend their position of leadership. The invitation to the organizational meeting stated:

> *"The deliberations of such a conference will (1) result in greater uniformity of the conditions under which students may become candidates for higher degrees in American universities, thereby solving the problem of migration; (2) raise the opinion entertained abroad of our own Doctor's degree; (3) raise the standard of our own weaker institutions."*

Growing slowly from fourteen universities in 1900 to thirty-nine in 1940, deliberately maintaining its exclusiveness, representative of no constituency except its own elite membership, the Association of American Universities was the most potent guardian of the values and practices of graduate education until the Second World War. It became the natural forum for the unending debate that began a hundred years ago and continues to this day. It repeatedly rejected proposals to accredit graduate work, generally by a very narrow margin, but for many years it maintained an "approved" list of undergraduate colleges. It deliberated at great length--but never established--minimum standards for graduate schools. In 1927 and again in 1935 it proposed "comprehensive inquiries into the present state" of graduate education but funds for the studies could not be found. In 1902 it debated whether the Master's degree should be regarded as terminal or as a prerequisite for the doctorate and in 1910 it conducted a survey of the "meaning" of the M.A. From 1925 to 1929 the Association of American Colleges conducted a careful inquiry into the training of college teachers in graduate schools and brought out a series of mild but sound recommendations. The AAC gave the report its hearty approval, but the AAU appointed a committee "to look into the matter."

A cynical appraisal that the Association of American Universities really never accomplished anything would nevertheless be unfair. It certainly protected to the best of its ability the integrity of the Ph.D. degree both by precept and example. It actively discouraged the granting of the degree honoris causa, so that by the 1930's this formerly prevalent malpractice virtually disappeared. Its member institutions maintained and improved their own standards by self-studies, limiting and even, in some cases, reducing their graduate offerings rather than sacrificing quality. When, under the pressures of World War II and its aftermaths, the Presidents of the AAU became too involved in fiscal affairs, they abdicated direct responsibility for graduate work and established the Association of Graduate Schools in the Association of American Universities.

The AGS now serves a similar purpose as its parent organization. Although its forty-one members form scarcely one-fifth of the total membership of the Council of Graduate Schools, it serves as "the leaven that leaveneth the whole lump," or, to change the metaphor from St. Paul to a more elegant Shakespearian one, it "is indeed the glass wherein the noble youth do dress themselves." It is, therefore, fair to say that, while the AAU and its parthenogenetic offspring, the AGS, have been properly concerned primarily with their own affairs, they have had a broad, salutary influence on graduate education as a whole and on large numbers of graduate schools individually.

In the past decade and a half substantial efforts to improve graduate education have been made by learned societies, education associations, and individual universities. Some of these were based on comprehensive studies and produced some sound and useful results. Others consisted of little more than tinkering with the degree structure and the minutiae of curricular requirements. It may be worthwhile to look at a few typical examples.

In 1956 the American Historical Association, through its Committee on Graduate Education, commissioned Professor John L. Snell, then of Tulane University, to conduct a study of the Education of Historians in the United States. Over a period of five years, the Committee gathered an amazing amount of statistical material on every conceivable aspect of education in history. It also collected comments and opinions from faculty and students as well as from prospective employers. All criticisms and conclusions are meticulously documented. The 244-page report, published in 1962, contains at its end a number of detailed recommendations describing minimum requirements for an acceptable graduate department of history and a step-by-step outline which a degree candidate should follow. It also gives sound advice on the training of teachers and on the fostering of good teaching habits in later life. The recommendations for minimum requirements were adopted by the AHA and are now being used as the basis for departmental self-study. However, a proposal by the Committee on Graduate Education to publish a list of "approved" departments who meet the minimum standards was quite properly rejected by the AHA membership.

A somewhat similar study of the Ph.D. in English and American Literature was undertaken in 1966 under the sponsorship of the Modern Language Association and funded by the Danforth Foundation. Professor Don Cameron Allen of Johns Hopkins, with slight assistance from an Advisory Committee, wrote the resulting 248-page book, published in 1968. Mr. Allen made extensive use of the questionnaire method, sending out a total of 3623 to persons who won Ph.D.'s in English between 1955 and 1965, and receiving 1880 usable replies. Instead of with a series of firm recommendations, he ends his book more suavely with "Forty-four Suggestions by Way of a Conclusion." He and the Advisory Committee used a unique method, however, to gain attention for and provoke discussion of these "Suggestions" by calling regional meetings (at Baltimore, Chicago, San Francisco, New Orleans, and New York) of the Chairmen of all Ph.D.-granting English departments. It is too early, of course, to judge how much impact the suggestions will have on some of the sclerotic English departments, but I recommend the book as sensible and besides good reading.

In late 1968 the National Endowment for the Humanities made a grant to the Council of Graduate Schools to make recommendations for the improvement of graduate education in the humanities. A ten-member panel of prominent academicians was established who met over a period of five months and produced a collection of position papers. These were presented on May 27-28, 1969, to a fifty-member conference consisting more largely of scientists, foundation heads, business and industrial leaders than teachers of the humanities. The position papers were thoroughly discussed and revised and are now being rewritten for publication this fall.

The training of college teachers has for about five years been a joint concern of the Association of American Colleges and the Council of Graduate Schools. A Liaison Committee between the two organizations was established in 1965 under the chairmanship of President Louis W. Norris of Albion College. The Committee produced a report entitled Preparing the College Professor for Liberal Arts Teaching. Among its several recommendations was one proposing meetings of the Liaison Committee with representatives of learned societies or disciplinary professional associations for the purpose of developing programs for specific disciplines. The first of these meetings has now been held with representatives of the biological sciences. Its report has not yet been published.

Mention should also be made of the modest efforts of the Council of Graduate Schools to assist in the improvement of graduate education. In doing so, it is only carrying out the specific charge contained in its Constitution. The Council has issued a number of brochures outlining minimum standards for the Master's degree, the Ph.D., the Doctorate in Professional Fields, and the Establishment of New Ph.D. Programs. It is always difficult, of course, to judge how much impact such publications have, but if the volume of sales is an index, it should be considerable.

Innovations on the part of individual universities, numerous as they are and important as some of them may become, are perhaps best left for treatment in other sessions of this meeting. Among these are such interesting programs as Cornell's six-year doctorate, the accelerated English Ph.D.'s at Johns Hopkins and Pennsylvania, Yale's Master of Philosophy, the Candidate's degree--or certificate--in the Big Ten and at California. Perhaps the Doctor of Arts at Carnegie-Mellon, Washington, and elsewhere are significant innovations. And there may be others that have not had the benefit of an efficient public information officer.

Before I conclude this feeble effort "to view things in their true relations and relative importance," I must devote a few minutes to the so-called intermediate and other sub-doctoral degrees. Let me begin with that unfortunate stepchild of American academe, the Master's degree. In a sense, the Master's degree itself began as an "intermediate degree," suspended somewhere between the baccalaureate and the doctorate and now some of our colleagues are trying to deprive it of even that precarious position and relegate it to limbo or outer chaos. Its beginnings were certainly inauspicious and its hood might well have been marked with a bar sinister, the ancient heraldic symbol of a bastard. From 1653 to 1872 American colleges awarded thousands of master's degrees "three years after graduation, on bachelors of arts who have led moral and upright lives, who are engaged in literary or professional pursuits, and who pay to their college a fee prescribed by its regulations." This pleasant practice was called "a master's degree in course" and incidentally still persists in England.

An even stranger practice was the award of the "Master's degree ad eundem." Under this arrangement, a college conferred the degree on graduates of other colleges, simply upon application by the candidate and payment of a fee. Begun by Yale in 1702 and copied by Harvard, Brown, Wesleyan, and others, this agreeable academic reciprocity continued until 1874. I need hardly point out that this practice did not serve to enhance the value of the Master as an earned degree.

The opening sentence of the Foreword to the Council of Graduate Schools' booklet, The Master's Degree, says in hopeful and somewhat pompous terms: "The Master's Degree is a respected academic award given in recognition of the successful completion of substantial post-baccalaureate study in a chosen field in preparation for scholarly and professional activities." Similar euphemisms appear in the catalogs of the 699 universities and colleges that award the degree. In many cases, these statements are pleasant fictions, in some they are outright untruths.

In brutal fact the Master's degree means so many different things in so many universities and colleges and even in so many departments within the same university that no one can possibly know the meaning and value of a particular degree. In some institutions it really represents a self-contained, substantial course of study with a clear and stated objective. In some it is regarded as the necessary prerequisite to advancement to candidacy for the doctorate. In others it means exactly the opposite, namely that the student has failed the qualifying examination for the doctorate and is gently eased out the backdoor with a master's diploma in his hand. One may ask, a master of what? In some institutions the candidate must write a substantial thesis, in others he must pass a comprehensive examination, in a few he must do both. And in still others he is not required to do anything at all except sit through thirty hours of course work without making a nuisance of himself. It is no wonder that Professor F. S. Thomas of Syracuse University, in a book entitled, University Degrees: What They Mean, What They Indicate, How to Use Them, wrote plaintively, "There is such a lack of uniformity in the courses laid out by the different universities leading to the same degree, that it is often difficult to decide what a certain master's degree indicates." The tragic thing is that Mr. Thomas wrote this statement in 1887 and that eighty-three years later, in the year 1970, the situation is, if anything worse.

Let us, for a moment, be perfectly honest with ourselves. If the Master's degree were actually "a respected academic award given in recognition of the successful completion of substantial post-baccalaureate study in a chosen field in preparation for scholarly and professional activities," would we need to think and talk about another degree? Would not the holder of a respectable and respected Master's degree be a welcome addition to the faculty of any college? I know the answers to these questions as well as you do: the Master's degree is not "a respected academic award" and to make it so would be a herculean task.

But let's look at the alternative. If a number of good universities should establish an intermediate degree--and I'm not speaking about the Doctor of Arts, which is terminal, and the Candidate in Philosophy, which is an interim title--and if the idea should catch on and become a great success, how long do you suppose it would be before the 472 institutions that now award only M.A., M.S., and M.Ed. degrees would move into the M.Phil. field? Some of them have already indicated such intentions. We have seen the old Master's degree become a classic and tragic example of the inexorable working of Gresham's law. It could happen again.

Now if I have given the impression that I am slightly unenthusiastic about a title somewhere between the Master's and the doctorate I must hasten to correct it. I am indeed unenthusiastic about any kind of a terminal or quasi-terminal degree of that level if it merely means the beefing-up of course content or the addition of another semester or year to the Master's program. But I want to make it crystal clear--to borrow a phrase from a prominent Washingtonian--that I am not speaking of the genuine, solid Doctor of Arts program advocated by the Council of Graduate Schools and now being established in a number of good universities. That Doctor of Arts is not an intermediate degree but a real terminal degree in its own right. To this I will come presently. I am speaking at the moment of various programs, carrying various degree designations, that are sprouting up in some institutions that would serve society much better by improving their existing Master's degrees. And I include in this category some of the highly prestigious universities that have helped to downgrade the Master's degree because they regarded it as below their dignity. If several great universities were to put their distinction and prestige into a concerted effort to strengthen the master's degree, I believe that a great deal could be accomplished. Thirty to fifty of our best and better universities should set about the improvement of the Master's programs in their own departments. All have some very good ones and all have some very bad ones. This should be followed by the establishment and promulgation of national standards for the degree. Most of the Master's degree granting institutions are looking for a good example and for sensible guidelines from the leading institutions. I am very sure that the establishment of good, strong Master's programs in fifty good universities would result in a great deal of self-assessment in very many others. Allan Cartter's Assessment of Quality in Graduate Education did not win him any popularity prizes but it certainly stirred a lot of graduate departments out of their insular complacency. The same thing could, and I say should, happen at the Master's level.

Now let me return to the Doctor of Arts degree, and I will begin with a confession. A small number of universities have for a good many years had programs leading to what they called a Doctor of Arts. I looked at these programs and concluded that they were not substantial enough to merit a degree that included the title "doctor." So I developed a strong aversion to the degree which persisted until about two years ago. Today I am an enthusiastic proponent. My conversion resulted from the recognition of a few simple, basic facts: (1) The great majority of college teachers, with or without Ph.D. degrees, are and will continue to be primarily concerned with teaching rather than with research. (2) The Ph.D. is by definition and should continue to be a research degree. (3) Ph.D. training is so thoroughly research oriented that the majority of graduate students are trained almost exclusively along lines other than those which they will actually follow in their careers as college teachers. (4) It is entirely possible to construct graduate programs of breadth and depth without primary emphasis on research to produce better trained college teachers than through the Ph.D. process. These seem to me to be simple cogent arguments sufficient, at least, to convince me. And I should add I converted myself without benefit of a missionary.

I do not propose to bore you with a recital of the draft statement of the CGS on the D.A. Most of you have already seen it. The statement is now being expanded and edited and will appear in paperback format as fast as we can get it to the printer. I do, however, want to make a few emphatic comments. The Doctor of Arts is not an intermediate degree. It is a terminal degree parallel and equal in quality but not in character to the Ph.D. It should be established only by institutions which already have Ph.D. programs or at least the capacity to mount them. And any institution that embarks on a Doctor of Arts program should be willing to employ and promote holders of that degree on the same terms as holders of the Ph.D.

Finally, let me now say some nice things about the Candidate in Philosophy title, for I am indeed very strongly in favor of this designation, subject to certain clear conditions. In the first place, it must mean exactly what it implies, namely that the student has successfully completed all--not just most--formal requirements for the doctorate, with the exception of the dissertation and the oral defense of the thesis. In the second place, it must mean that the student has been accepted in good faith by his department and by the university as a candidate for the doctorate and that he will not only be permitted but expected to submit his dissertation within such reasonable time as determined by the university. The corollary to this condition is that the title must never be awarded to a student who, though he has completed all formal requirements, is not acceptable to his department as a doctoral candidate. To award the title to such a student would be the sure way, and as far as I can see, the only way, to degrade its meaning and value.

The use of this title would also provide some advantages to the academic world in general. It would be a definite guarantee to an employer that the applicant for a position is exactly what he represents himself to be. Those of you who have occasion to interview young academicians for faculty or research positions know how difficult it is to determine how far along they are. They tell you that they have only another year to complete, that they are working on their dissertations, that they have finished all requirements. I don't mean to impugn their veracity; many of them really don't know how much they still have to complete. But if they come to you with a candidate's certificate, you know exactly where they stand.

Finally, the candidate's title is far less vulnerable to misuse and debasement than any intermediate degree. It can only be awarded by a university or college that offers a bona fide doctorate in a given discipline. Where there is no Ph.D. there can be no candidate.

In the past months I have read hundreds, perhaps thousands of pages of books, monographs, articles, and proceedings about graduate education and efforts to improve it. To read this "stupendously unentertaining literature" a little at a time--fortunately the journals don't all arrive on the same day or even the same month--has a diluting, mitigating effect. To ingest it in one solid mass has an impact that I can only call depressing. It is depressing for two reasons: First, graduate education, and particularly the Ph.D. degree, has always been the target of criticism, but why must this criticism always be destructive and hardly ever constructive? Why must it always be harsh, blatant, strident? Gentle people like Charles Eliot and Abbott Lawrence Powell, even the great pacifist David Starr Jordan, become vituperative when they speak of the Ph.D. They all take it apart, but they rarely put it back together. And the other cause for depression is the dreary monotony of the dialogue. Everything that is discussed in 1900 is rehashed ten, twenty, sixty years later. The tune never changes, only the lyrics become less elegant.

To be sure, we have some additional problems in 1970. One of these is "relevance." But even that has been discussed before (cf. President Harper's remark in 1895). Another is "special treatment for the disadvantaged." But basically the ills that plague us are the same that our antecedents debated. They rarely did more than complain; they occasionally proposed small repairs of the Ph.D. structure. They never remotely thought of radical reorganization to meet the needs of a society that was changing faster than they ever realized. Such reorganization will come, indeed is already upon us, in spite of anything we may do. It is my hope, fatuous though it may be, that the developments in graduate education that will inevitably take place in the next decade will, to some extent, be shaped by the graduate schools themselves and not be imposed by external forces.

PERSPECTIVES

Mina Rees
President, Graduate Division
City University of New York and
Chairman, The Council of Graduate Schools
in the United States

I am delighted to be here to participate with the members of the Western Association of Graduate Schools in honoring Gus Arlt and to join you in saluting Gus on behalf of our brethren in graduate education throughout the country.

"Changing Patterns of Graduate Education!" "The more it changes the more it remains the same." As Dr. Arlt has said elsewhere the problems that vex us today were recognized and discussed and debated a century ago, even before the formal establishment of the first graduate school. What is there about our present time that gives us confidence that somehow we will be different? As we all know the criticisms of the Ph.D. that have been made for a hundred years have resulted over these years in very little change in the pattern of the Ph.D.: for how long have we heard that the Ph.D. is too specialized, that we are turning out people who know more and more about less and less? And yet at least 70 years ago the Ph.D. was accepted as a proper preparation for teaching in our colleges and universities; and the suitability of the staff of a liberal arts college has long been judged at least partially on the basis of the proportion of the staff that holds Ph.D.'s.

What is there about the present time that makes us different? I suppose the prior question may well be asked, "Are we indeed different!" And of this we cannot be sure until we know the outcome. But we do know that, at least so far as intermediate degrees are concerned, the M-Phil. has been established in a couple of places, and a number of institutions are giving certificates or degrees of candidacy. And there is some indication that some graduate schools are moving away from the position that they have held for so many years.

When the mathematicians gave serious consideration somewhat over ten years ago to the desirability of introducing a Doctor of Arts degree it was not because of considerations like those that we are facing now but because they despaired at that time of producing enough Ph.D.'s to meet the needs envisaged for college teachers. Now, we are told that there is an overproduction of Ph.D.'s and in spite of that we are considering and, in fact, in some instances, have introduced the Doctor of Arts degree.

I believe our need to consider some changes arises from two basic reasons: (1) the very much larger percentage of the age group found both in undergraduate colleges and in graduate schools; and (2) the intensification of specialization that has occurred as knowledge has expanded. Though this increase in specialization is merely continuing a trend, it is occurring at a time when the new groups of students attending our colleges and graduate schools (including increasing numbers from minority groups) have different motivations, different purposes, different needs from those we have served in the past. The change in numbers and the deep problems of our society have introduced a discontinuity in the type of expectation our students bring with them. Undergraduate dissatisfaction with the quality of teaching is expressed loudly and most of us feel that we must pay some heed to it. And the desire of many graduate students to acquire an education more broadly based than the typical Ph.D. and with less emphasis on the kind of specialized research that characterizes many good Ph.D. degrees must also receive some attention.

I want, however, to insert some comments:

1. The recent study by the National Science Foundation of

supply and utilization of engineering and science (natural and social science) doctorates, 1968-1980, concludes not that we may expect an overproduction of doctorates in these fields in the next decade but rather that, if present and projected trends continue, it will be possible to provide some qualitative and quantitative improvement in patterns of utilization of science Ph.D.'s. Of the 1969 Ph.D.'s in these fields (147,000) nearly three-fifths were employed by universities and colleges (87,000), one-quarter were in private industry (39,000) and the remainder were employed by government agencies and other organizations (14,000 and 7,000 respectively). It would be possible, if present trends continue to increase somewhat the percentage of doctorates on college faculties and to provide additional support to industry and government. But these so-called "improvements" imply that the users of the expanded supply find the product satisfactory. And it is to this question that we are addressing ourselves.

2. The second point I wish to emphasize is the great variety that characterizes Ph.D. programs from university to university, from discipline to discipline and from student to student. Though virtually all Ph.D.'s may conform to the basic outline set forth by the Council of Graduate Schools, among others, which formulates the historic character of the Ph.D., they differ widely in scope and depth of coverage and in the character of the dissertation. During a recent discussion of the proposal that the Doctor of Arts be sponsored by government agencies, the president of one of our state universities observed that his was a regional university, that the Ph.D.'s it produced did in fact meet all the needs of the region for college teachers and for industrial researchers. He said that the number of great scientists and scholars produced might be minimal, but that he doubted that the employers of his Ph.D.'s would mount the complaints about the Ph.D. that had been adduced by the sponsors of the D.A. I would consider it unfortunate if the availability of support from foundations and government agencies pushed such a university into a Doctor of Arts program that it considers unnecessary.

On the other hand, college students are not the only customers of the Ph.D. who have expressed dissatisfaction. In recent meetings with representatives of industry we have found that there was considerable feeling in a number of companies that use science Ph.D.'s that here again the training is too narrow and that the new holder of the Ph.D. is too focussed on his own research problem and too unable to move into the kind of research that industry requires. Moreover, the larger society also has a need for multi-disciplinary and interdisciplinary training for the people who must handle the problems that we all confront and give such high priority to: the problems of the cities, the problems of the environment. Though few schools have demonstrated their ability to handle with distinction, at the doctoral level, programs that are interdisciplinary or milti-disciplinary in character, it is clear to me that graduate education has the responsibility described by William

Rainey Harper, Ph.D. for "the adaptation of its methods and training to the practical problems of the age in which we live." And it should I think move in the direction of providing society with people trained to handle the very difficult and pressing problems for which a broad multidisciplinary background is essential.

As Dr. Arlt observed, what the pioneers of graduate education chiefly lacked in the 1870's was an organizational pattern in which graduate education would flourish; and two recent reports identify the same kind of need if the present-day pioneers in problem-oriented research and education are to be successful. These reports make suggestions for new organizational patterns to enable us to provide education and research in these new areas of concern. A White House report on Environmental Quality urges the federal government to support the formation of "schools of human environment," following the precedent of schools of agriculture and of public health, that concentrate on solving problems. The report[1] suggests that such schools should focus on problem-oriented education and research directed toward people--their need and desire for satisfying life in pleasant surroundings. The report says that at least two main criteria should be satisfied by such programs:

1. They should have substantial or complete control of the faculty-reward structure to avoid what the authors say is a tendency of discipline-oriented faculty members to resist programs that cross traditional lines.
2. They should have a relatively free hand and be innovative in introducing course material, educational programs and . . . curriculum requirements for degrees.

The second report[2] to which I refer is the National Academy of Sciences--Social Science Research Council's report on the Behavioral and Social Sciences. It makes a "Proposal for a New Form of Organization: A Graduate School of Applied Behavioral Science." It says: (see next page)

---

[1] Formulation from the "Chronicle of Higher Education."

[2] The Behavioral and Social Sciences, Outlook and Needs. National Academy of Sciences, Social Science Research Council. Published by National Academy of Sciences, Washington, D.C., 1969, pp. 200-202.

"PROPOSAL FOR A NEW FORM OF ORGANIZATION: A GRADUATE SCHOOL OF APPLIED BEHAVIORAL SCIENCE

"There can be little doubt that the behavioral and social sciences will become better basic sciences if their methods and findings are repeatedly and continuously tested for relevance to actual social behavior. An academically sound and organizationally firm base is needed for the development of behavioral and social science that is applicable to the large problems of society. The attack on such problems should not wait for crises to call attention to social pathology but should be on a continuing and long-range basis, with full attention given also to the rich theoretical contributions that can be made. Through research on genuine social problems, social scientists can improve the substance of their fields according to their own aspirations, while also serving society.

"We believe that an effective organizational structure for problem-oriented social science research must be multidisciplinary, including both individuals with training in more than one discipline and specialists from various disciplines committed to working on common research problems. The work must be applied not only in the narrow sense of doing the bidding of a client who has a problem to be solved, but also in the broad sense of being pertinent to the persisting critical issues of the real world. Furthermore, its status in the university must be such that potential scientists of the highest caliber can be recruited, trained, and retained.

"We propose a Graduate School of Applied Behavioral Science as a means of meeting these requirements.

"RECOMMENDATION: A GRADUATE SCHOOL OF APPLIED BEHAVIORAL SCIENCE

"The Committee recommends that universities consider the establishment of broadly based training and research programs in the form of a Graduate School of Applied Behavioral Science (or some local equivalent) under administrative arrangements that lie outside the established disciplines. Such training and research should be multidisciplinary (going beyond the behavioral and social sciences as necessary), and the school should accept responsibility for contributing through its research both to a basic understanding of human relationships and behavior and to the solution of persistent social problems.

"The establishment of a new school in the university structure should be undertaken only after the most careful consideration and should not be undertaken at all if other means would be as efficacious. We are convinced that the location of the behavioral and social sciences within the specialized departments of the arts and sciences colleges of our universities militates against the development of the potential of these sciences as contributors to the solution of social problems. The whole tradition of specialist scholar-teacher-student relationships works against concern for the arts of practice and also against large-scale multidisciplinary research and instruction. The experience of the recent past attests to these incompatibilities. It would be easy to collect many illustrations of how alien applied or professional sciences are within the arts and sciences faculties of universities. There are always a few exceptions, but the estrangement of applied research from the departments tends to be greatest in those universities where the departments are strongest, and thus tends to degrade applied work in the very settings where it might best gain prestige.

"Although we refer to the new instrumentality as a school, other organizational arrangements might serve similar ends. One such possibility exists in the established professional schools. For example, a school of business that wishes to broaden itself into a general school of administration and policy planning might conceivably assume many of the functions of the new school, and other existing professional schools could take on other functions. Another possibility is to consolidate existing institutes as the core of a research center in the behavioral and social sciences, with greater stability than the separate institutes now possess. The Institute for Social Research at the University of Michigan, for example, has achieved a good deal of stability over the years and represents a consolidation of three centers with differing functions: the Survey Research Center, the Research Center for Group Dynamics, and the Center for Research on the Utilization of Scientific Knowledge. Except for its dependence on the departments of the arts college for instructional and degree programs, it comes close to our proposed Graduate School of Applied Behavioral Science. We do not wish to prejudice the variety of administrative arrangements that might be developed; however, in recommending a Graduate School of Applied Behavioral Science, we hope to have made clear (1) that we are dissatisfied with the limitations of the present departmental and professional school structure and (2) that some inventiveness, beyond the proliferation of specialized institutes, is necessary to make behavioral and social science research more substantial and more effective in contributing both to the solution of social problems and to the training of those who do this kind of research."

The reports I have cited may be right; or it may be that the graduate schools themselves are able to accommodate the needs of multidisciplinary research. In any case, it is, I believe, important that we find more effective ways to address ourselves to society's outstanding problems. If we succeed, our efforts should lead to important new insights; they may often result in the strengthening of existing disciplines; they may possibly lead to the development of new disciplines; and they should result in the production of practitioners with backgrounds that equip them in significant ways to participate in our attempt to make the world and our social order more acceptable to us and to the youth who inherit it from us.

We need also practitioners trained, like the M.D., in existing knowledge, and I believe that we should give attention not only to the D.A. as a practitioner's degree for teachers, but also to these other practitioner's degrees. Some of these are familiar, like the Ed.D., say, in educational administration. Such practitioner's degrees are often characterized by internships, and useful results are apt to be found by practice rather than by research. Such training programs are expensive, and, at this point in history, the graduate schools and the universities are surely not prepared to undertake many expensive new programs. But there are other practitioner's degrees, like the Doctor of Chemistry, being developed at at least one university, and the Doctor of Psychology, that already exists, in which the problems of internships can probably be solved in conjunction with industry or other users. For any of these practitioner's degrees a concomitant problem, like that faced by medical schools arises: the problem of continuing education for the new doctor. I need not go into a discussion of the great variety of programs of continuing education in which medical schools and many graduate schools are now engaged; but it is clear, that practitioners, if they are to continue to be effective, must find ways to remain in touch with significant advances in their subjects. And the graduate schools may find themselves engaged still further in this type of education.

Though I feel sympathetic with the position of the Board of Regents of the State of New York that we should not multiply degree titles ad infinitum, I do believe that we must be prepared to experiment with high quality advanced education for young people and some who are older who wish to enter into or improve their effectiveness in fields that require sophisticated advanced training of a type not normally in established Ph.D. programs.

Will the proposed new degrees meet the need? It remains to be seen whether the D.A. will earn acceptance. Certainly it is crucial that the quality of the degree be high if it is to be accepted on a par with the Ph.D. in institutions that for many years expected to employ Ph.D.'s. The new degree must also really produce a student whose attitude toward his teaching assignment and whose participation as a faculty member in a liberal arts college or in a two-year college is enthusiastic. The D.A. programs must not become the dumping ground for students who can't make it to the Ph.D. Nor must the D.A. be given by faculties and institutions not equipped to give high grade doctoral training. Assuming these optimum conditions, will the students' training be adequate? I recently had a discussion with one of our students who a year ago told me that she was taking a Ph.D. in history only because it was the union card by which she could become a college teacher. When I saw her recently, I told her about recent developments that seemed to indicate that the D.A. would be introduced and described the proposed D.A. program to her. I asked her what her feelings would be about taking that kind of degree. She has just completed her orals and is about to go to Europe to write a dissertation. She assured me that she wanted none of the D.A. What she wanted was the experience she'd had. She was convinced that she needed the kind of study in depth that she had engaged in in preparing for her orals and she looked forward to writing a dissertation and in subjecting her work to the critical scrutiny that the scholars on the faculty would give it. This is a young woman who has been serving as a T.A. in one of our community colleges. I asked her whether she thought she had been effective in reaching the community college students she has been teaching and inquired whether they were all in transfer programs or whether some of them were pursuing terminal programs leading to associate degrees in technologies. She recognized, of course, that her own assessment might not be valid, but explained that she did have both transfer students and technology students and that she had a strong impression that all of these had found her teaching stimulating and, if I may use the word, relevant. She felt strongly, too, that her Ph.D. training had been not only sufficient but necessary to enable her to give high quality instruction to her community college students. This experience with a single student leads me to return to a consideration of the merits of the Ph.D., at least in some fields and for some students, as the appropriate degree to satisfy our needs for practitioners in teaching at the liberal arts colleges and the community colleges.

I think it would be unfortunate if too many were to leap too enthusiastically on the band-wagon of the D.A. There is probably very little danger of this. But I hope that students will not be advised that the D.A. is the degree to take to prepare for college teaching even though the degree which will give them satisfaction may be the Ph.D.

When over ten years ago the mathematicians met for their final consideration of the proposal for the D.A. that had been under discussion for over a year before that time, a long and exhaustive consideration of the D.A. led to the conclusions: (1) that the problem of status for holders of the D.A. would inevitably be severe; (2) that the proposed new degree would be extraordinarily difficult to give, if we maintained the standards that were deemed necessary; and (3) that the Ph.D. had for years had a wide variety of meaning for different people and for different institutions and was flexible enough to accommodate the new need. In a survey of the mathematicians who had received the Ph.D. between 1915 and 1954, it had been ascertained that 1/3 of these Ph.D.'s had done no research after receiving the degree and that 1/2 of those who were teaching in liberal arts colleges had no research record. All of us were aware that the Ph.D. had been awarded to many students whose prime contribution would be in teaching and that the character of the dissertation varied greatly between students at a given university, and between universities. But the Ph.D. had proved itself as appropriate preparation for the prospective college teacher. What was true ten years ago is probably true now except that the range of problems facing educational institutions may require that preparation for a lifetime of teaching in liberal arts and in community colleges, should include, as part of a student's graduate experience, a broader consideration of the problems that face a college teacher and of the social responsibilities he undertakes in joining a faculty, as well as a more deliberate training in the arts of teaching his subject. The design of the D.A. may point the way toward improvements in the Ph.D.

What, then, do I conclude as I address myself to the topic of this session, "Perspectives." In presenting my conclusions, I want to begin by looking back with Bernard Berelson, quoting from his 1960 book on Graduate Education in the United States. In summarizing the history of graduate education he says:

> *"Throughout the 1920's and 1930's, the discussions of the AAU returned to the topic: should there be two doctoral degrees, one for researchers and one for teachers? Should there be more direct training for teaching? Was the doctoral program too specialized? The conclusions, to the extent there were any, seemed to echo Wilbur Cross's diagnosis of 1925 that 'there is no escape from the dual character' of the degree."*

Among Dr. Berelson's many conclusions, we find:

> *"The best chance for revising the traditional graduate program to produce an undergraduate teacher for the smaller liberal arts colleges lies in introducing a new intermediate degree with a (not the) doctoral title."*

Though the Doctor of Arts, as recently described by the Council of Graduate Schools is not an intermediate degree, I believe it does provide the best chance of providing a new route for producing the kind of teachers we need in some of our colleges. But I believe, also, that many universities, many disciplines and many students will conclude that the versatile and proved Ph.D. can do the job for them, better than the new degree. I would comment, also, that I agree with Dr. Berelson that the college that employs a newly christened Ph.D. or D.A. has an obligation to induct him into his new profession, and that very few of the colleges that complain loudly about the inadequacies of the Ph.D. as preparation for college teaching are meeting that obligation.

Well prepared and motivated D.A.'s will, I think, be in a position to take leadership roles in the two year colleges. But it is worth recording a discussion at the most recent meeting of the Advisory Council on Graduate Education of the State of New York at which Dean Shirley Spragg and I raised a question about adding the D.A. to the list of degrees approved for award in New York State. As we explored the question, the usefulness of the degree for the preparation of community college teachers was mentioned. The member of the staff of the State Education Department who is charged to inspect and report on the quality of work going on in these colleges commented that, in his judgment, what a number of our upstate community colleges really needed was some teachers with solid master's degrees in arts and science, instead of the education degrees with which many of them are now equipped. This should, I think, remind us that though many of the most prestigious universities may be paying very little attention to the quality of their master's degrees, there are many less well known institutions that are still providing first class, solidly based master's programs whose contributions toward filling the need for well educated college teachers should not be ignored. I very much hope that the extensive discussion of the D.A. and of intermediate degrees will not induce these institutions to abandon the efforts they have been putting into high grade master's programs.

Beyond the D.A., I believe there is a need for the development of other practitioner's degrees, built on existing knowledge, providing broad training particularly in the sciences and in the social sciences for practitioners of their subjects in business, industry, and education. Particularly for practitioners who have not learned the skills nor formed the habit of carrying on research, the need to provide for continuing education should not be lost sight of.

The acute need for practitioners equipped to handle problem-oriented research on the basis of breadth and depth of interdisciplinary and multi-disciplinary background provides the universities with one of their outstanding challenges. Because we have had so little success in our efforts to meet this challenge, there seems to be a need for organizational innovation. Whether or not the suggestion made in the two reports I mentioned indicate the only direction appropriate for this innovation I believe that problem-oriented research deserves the attention of the graduate schools. We have solved the problems that presented themselves when such disciplines as biochemistry and comparative literature were born. We should be able to develop the expertise and the flexibility to address ourselves to some of society's outstanding problems, and to prepare a generation of experts better equipped than our generation has been to handle them.

These, then, are the perspectives from my vantage point. Or could it be that those post-revolutionary French were right; Plus ça change, plus, c'est la meme chose.

DISCUSSION

LLOYD, U.S. International University: The interdisciplinary work in the social sciences seems to be one thing we are all working rather hard to get. Our concern in our institution is to be able to get it without scarificing depth in the sciences. I wonder if Dean Rees or Gus would have a comment on that.

ARLT: Some of you are better qualified for this than I am. The problem that Wes phrases is not only a problem with social sciences, but a problem in all areas where the need for broader education is now being recognized. How can we achieve this without sacrificing depth? Of course this is one reason why I expect that the Doctor of Arts degree has merit because it could achieve, it must achieve, a much greater breadth than a typical Ph.D. now achieves. We start off Ph.D. programs with the fond hope that we're going to produce a person who covers the entire field but we don't give him a chance to cover the entire field. We begin to make him specialize as early as his first year of graduate work and sometimes even earlier than that, so that by the time he gets to the research effort he is doing and to the dissertation he is going to write he has a pair of blinders on that gives him tunnel vision and he doesn't see anything else except his narrow specialty. We have regarded throughout the years narrow specialization as the hallmark of the scholar in depth. I think its a mistake. I think that we have not really seen that we are preparing people who eventually have such a limited specialty that they know nothing outside of that and they become super specialists in this very narrow segment and are misfits in the rest of their fields. I didn't want to say anything about that this morning in my remarks because I covered that pretty adequately at Arrowhead last year where I spoke about the production of specialists and then super-specialists and then unfortunately we're going to get into what Wytze referred to as the degree beyond the Ph.D. or our super-super specialists, and the people who are complete misfits outside of that. So I don't think that there's really any very serious conflict between training and real breadth and a reasonable amount of specialization. That reasonable amount of specialization is certainly going to be broad enough especially in the social science fields and would have to deal with the environment and with the immediate problems of cities, etc. I probably didn't answer your question very well, Wes, but it's the best I can do with it; now let's see what Mina can do with it.

REES: I don't view it quite so calmly as Gus does; I find that this is really much more difficult than even the structural problem though I admit that's important. I do think that if you come back to what I referred to as companion volume, there are several companion volumes: one deals with political science, one in sociology and one is coming out in economics, and I'm not sure whether psychology will participate. The attitude that political science has taken in their report on political sciences is that research is not that profitable in political science, anyway, and I must say from what I know of it I would agree. My feeling is something like this as the behavioral sciences are involved: you have to worry about other things. I had a discussion with a behavioral scientist and an engineer the other day asking the behavioral scientist: Could they educate engineers? They said No. And I said to the engineer: Could they educate behavioral scientists? They said Yes. Ok, there's a problem in there. It seems to me the crux of the problem is to see that--well, there are two. One of them is to see that people operating out of the discipline on a multi-disciplinary problem have the methodology of the discipline under their belts. Now in political science most Ph.D. programs require comparative politics, international politics, American politics, etc. These are things which from my way of thinking a competent well trained person can get pretty much for himself. Sure he needs to talk with colleagues, and read some stuff, but the thing they can't get for themselves is the substantial methodology which most political scientists of advanced age don't have anyway. The economists have a much more sophisticated methodology and if anybody is going to get that it's going to take a while to get it. The sociologists, of course, are going in for a lot of survey stuff, but it seems to me that this is a sine qua non. Now the other crux that I was going to talk about is the need that we all have to feel sufficiently comfortable in our own field so that we can go ahead ourselves in another field and one thing we've got to do if you really are talking about inter-disciplinary versus multidisciplinary attacks is to make it clear to people that it's legal and expected that they get some education outside their field of specialization. I think that this is the kind of problem that the committee had in mind when they thought that we needed a new structure. At the AAAS meetings in Boston somebody asked Barry Commoner how you manage to get to be an expert in environment and Barry will tell you he's the greatest living one. He said you've just got to educate yourself. And I've learned a lot since I became a botanist. I think that one of the sacrifices you have in most Ph.D. programs is that you make people think that the only education they need is in their own special field. The focus is on a problem that needs many disciplines. I think that if you put people in the same room they begin to talk to one another. We have a new thing going in City University in environment that involves environmental psychologists, architects, liberal science people, and sociologists and they are managing to talk to one another though each of them is thoroughly indoctrinated within his own methodology. It seems to me that you're going to have to make this kind of sacrifice if you truly mean to have inter-disciplinary training. You're going to have to make the kind of sacrifice that we all have to make in our undergraduate teaching. We don't try to teach everything in the first course in anything. We decide there are some basic ideas we want to get across and we hope that somebody will get the idea you can read a book. And it seems to me that we just have to insist on self education once we have assured ourselves of the ability to move around. I remember during World War II I was on a mathematics committee; we had our mathematicians working on a great variety of problems and one of the things that interested me was that when each of two mathematicians approached the problem from the point of view of his own very specialized expertise, he attacked the same problem quite differently. The two mathematicians used their know-how. It seems to me that in this kind of inter-disciplinary and multi-disciplinary concern everybody has to have the know-how and beyond that he has to acquire information.

MAGOUN: I would like to ask a different kind of question about the advocacy for the development of new organizations and new kinds of programs and get to the political aspects of these, perhaps. Because of these projections for an oversupply of doctorates in the '70s, Allan Cartter and Clark Kerr's Carnegie Study are now getting good publicity, but this is leading to the retrenchment in graduate education and you can see this in the federal agencies, you can see it in Harvard, you can see it in Stanford, I've read that it's coming to Claremont, and God knows it's on us in the University of California and I think we need to find a way of dealing with this response to these projections which involve retrenchment in graduate education before we will know how to respond to and reorganize and to develop inter-disciplinary and other new kinds of problem oriented programs. And I hope that our two experts here can tell us how we can respond to or combat this drive or wave, if you will, toward retrenchment in graduate education before we will have the opportunity to improve it.

REES: About the D.A. problem and about the others, I notice that in a report on minority groups there's a dirty crack made about the program announcement of the National Science Foundation for the support of research in multi-disciplinary research. I believe this is a clear direction in which federal monies will be available. Now if you're talking about the fellowship level I think it's hopeless about that. I don't see what we can do about it. But so far as supported research is concerned I think this is the one direction in which both the Bureau of the Budget and Congress are prepared to go ahead with support as a modest program in the NSF budget for next year. Well, it is a very modest program actually for this year. And both at the level of the Bureau of the Budget and in the Congressional screening system there has been quite specific support for that. The fellowship situation I think is really a quite basic problem and I feel a lot of organization is needed to justify it. I am more concerned and George Springer and I were worried about this earlier on that point when our Ph.D.'s aren't able to get teaching jobs. We're going to produce some D.A.'s who will be beautifully equipped to do the teaching. I don't know what it will do to the Ph.D. but what I was really trying to address myself to is a clear need of society and a need which I think we have to be able to respond to effectively.

ARLT: Dr. Rees has touched on what I regard as a very difficult point there. In the first place I have never agreed with Allan Cartter's assessment of the supply and demands for Ph.D.'s. I am even further away from Clark Kerr's. I think actually we are not over producing Ph.D.'s. The thing that happened in Denver at the Foreign Language Association meeting, and that happened at the American Historical Association where hundreds of new Ph.D.'s were not even interviewed is falsely presented. Because these people only want to be interviewed by the University of California at Berkeley, and by Harvard, and by Princeton and places like that and they weren't even interested in going to see anybody in less prestigious institutions. There were a great many department heads from good universities and very many more from liberal arts colleges who never even had a call from a Ph.D. who was looking for a job. So I don't think that's a typical situation. However, the Cartter prediction and the Kerr predictions have been very welcome weapons for the Bureau of the Budget. Steve Hatchett is here; he can tell you about this. I just called him a couple of weeks ago because NIH is under a terrific pressure from the Bureau of the Budget to phase out its traineeship program at the present time. The Bureau of the Budget used the argument that in spite of the very substantial subsidies they have put into the bio-sciences the increase in Ph.D. production in those fields is less than it is in other fields that are not so well supported. They have statistics taken, of course, out of the National Research Council's report on doctorates which is perfectly authentic. The humanities and social sciences have increased 9.5 and 9.2 percent respectively per year in the last five years. Heavy subsidies in the bio-sciences have released a sufficient amount of intra-university money so that kind of money is being put into the social sciences and humanities and other fields and the Ph.D. production in those fields thereby has profited. The universities themselves have not put any kind of money into the bio-sciences comparable to what the National Institutes of Health have put in. I think this is a very serious problem. It's serious because even if there is this small oversupply of Ph.D.'s at the present time which we didn't expect because we thought the draft would cut that down considerably, if the government agencies now retrench with predoctoral support then the Ph.D. loss will hit us six years from now and not in 1971, '72, '73, where we had expected it. But we will have a very much more serious loss after 1974. We just simply have to work together. I think the NIH needs some help from all of us to combat these arguments from the Bureau of the Budget. And of course other federal support agencies also need help from us.

THOMPSON, New Mexico State: I have difficulty understanding how our current Ph.D.'s who are supposedly of narrow training and poor teachers are going to turn out broadly trained expert teachers.

ARLT: I am not sure I understood the question, but I think maybe I did. One thing that was discussed this morning by Mina and not by me is the need for internships whether it's in the Ph.D. program or the Doctor of Arts program. The only way we're going to improve the teaching quality of the Ph.D. is to give him a teaching ingredient in his program. I think it is completely unrealistic to expect a person who is primarily trained in research to become a good teacher just from having been a teaching assistant for a year or even two years. Because if he is a teaching assistant for a year or two years all he teaches is an elementary course or he supervises a laboratory section or something of that sort and nobody ever tells him how to become a better teacher. What he needs is an internship in teaching the things he's going to teach after he gets out and not teach an elementary course. This is my idea of how we can turn out Ph.D.'s who will be better teachers. Now this may make the Ph.D. process a year longer, but I've already been asked this morning whether the Ph.D. process wasn't too short. Nobody in the humanities or social sciences or in education is going to buy that because the average length of time already is eight and one-half years in humanities and eleven years in education. That I think is too long a process. But if we insert a year of internship and omit a year or two of this really unprofitable teaching assistantship of the graduate program we can produce better teachers with the Ph.D. degree or the D.A. degree.

REES: I think Gus missed the subtlety of the question. I think that the answer is that there are some people like us for example who though we are kind of trained specialists manage to be or get to the point where we appreciate the breadth of our subjects as well as the specialties. In fact there is a great deal of faculty resistance in the case of those faculties I've been in conversation with about moving to the kind of breadth we've been talking about. I mentioned the Doctor of Chemistry degree and I talked with the Academic Vice President of the institution where this is being discussed and asked specifically about this: whether his faculty in chemistry which was a very huge faculty was prepared to give the kind of broad training that they agreed would be needed if they were training people for industry. He said they were enthusiastic about it. This is a very able faculty and I think that probably the answer is something like that. You've got to get those few very able people who can handle that kind of breadth we have been discussing and that not everyone with the Ph.D. can do that.

SHAO, University of the Pacific: May I comment on this because we are indeed considering the introduction of the D.A. in English. The other day I was interviewing a prospective candidate for a job in the English Department. He is getting his Ph.D. from Berkeley in linguistics. The idea came to us in our discussion about how to use staff, your faculty who are engaged in the training of D.A.'s. The implication for hiring practices will be that graduate departments must consider the possibilities and also the desirability of hiring D.A.'s later on for the training of D.A.'s very much in the same way that the Ph.D. is teaching Ph.D. candidates in the tradition of perpetuating the training. Otherwise, I think the question implies it might be a hopeless spinning wheels kind of operation.

JUSTICE, University of California, Irvine: The other day we had a meeting of graduate students to talk about different degrees, and especially the Doctor of Arts and one comment that came through very clearly from the students was something like this: Why should we elect to take a Doctor of Arts program and go into teaching when we can take a Doctor of Philosophy program and either go into teaching or research? The Doctor of Arts program to them reduced the number of options they would have later in their career. I see this at least initially as a serious drawback to the program. I wonder if there's a way we can get around it.

ARLT: I have never advocated and I am sure most of the people who speak of the Doctor of Arts program have never advocated the elimination of the research ingredients. The reduction, yes. But every person who takes the Doctor of Arts degree should not only know what research is about, he should be able to do research, he should be able to demonstrate in a relatively elementary manner that he can write research, and he should be prepared throughout his lifetime to be able to read continuing research as he teaches. I can't stress this too much. The Doctor of Arts program should retain a very substantial research ingredient but it should not be the major part of the training of a college teacher. I don't know how I could make it any simpler than that.

GORTER, University of Hawaii: If it's alright with you I suggest we defer the discussion of the Doctor of Arts degree because tomorrow morning Dean McCarthy will have this as a topic in a panel discussion during the Fourth General Session.

BRAGONIER, Colorado State University: I would like to ask the panel if they are able to comment on the possible use of postdoctoral appointments in fields outside their specialty. Let's consider, for example, that we do have an oversupply of Ph.D.'s--that's debatable, I agree. And if we do would it be possible to get the breadth of training about which we are talking in the form of postdoctoral assignments in fields outside your specialty. A biological scientist as a specialist would take a postdoctoral assignment with an outstanding department of social sciences. Is this type of exchange possible, has it been considered, and is anybody working on it?

REES: I can answer it this way in a somewhat narrower framework. I think there's no question, we've got one now, in this environmental thing we're working on. An architect is getting training as a psychologist. To be sure this is a doctorate in architecture, but nonetheless is a typical professional degree there. As you know the many effective uses of the postdoctorate have been to train people within a broad discipline in a specialty they have not trained in. In chemistry you get some new techniques, for example, that they didn't learn in their own specialty. I think it's just a natural to do that. I think, however, that we've got to train students in inter-disciplinary framework so their point of view is developed. I think that's where the problem is.

MCNITT, U.S. Naval Postgraduate School: I thought I would just mention in the form of a comment that there is an intermediate degree that seems to be working out quite well at our place, having found weaknesses at MIT and Cal Tech in the field of engineering. This being an engineering degree as both Mina and Joe McCarthy know, our offering is a very strong master's degree with a thesis required. We're seeking something even though it is a problem-oriented and practice-oriented curriculum to carry some of the specialists a little further. Both MIT and Cal Tech have had some success with this. For three or four years we have done the same. It has not in any way degraded the master's degree or the acceptance of it. I asked Dean Brown of MIT not so long ago how he felt about this. He said they intend to continue it just as long as they need. It is very welcome at the present time but when the Doctor of Engineering is well established and accepted it may well be disestablished. We'll probably look at it the same way.

JACKSON, University of Idaho: It seems to me that we're getting so concerned with graduate work that we are neglecting the undergraduate student and his need for a broad training. I hear nothing said about this. We seem to be talking as if the only place we learn something is at the graduate level, therefore one needs greater breadth. This is not true. The objective of an undergraduate degree ought to be a good deal of ability for self education and thereby the graduate level permits a high degree of specialization. And this is part of the whole man. Do you wish to say anything about this articulation or have you forgotten about it?

REES: Recently I had a rather long conference with the two young people who were heading up one of our institutes. It was very interesting because these were people who were just not academics though they have lots of very bright ideas and this was precisely the question they explored in depth at that point. There are various ways of doing this. Like you, I feel that the undergraduate experience ought to be a broad experience and that the graduate experience can build on that. On the other hand, I think that the thing that I have been talking about involves a kind of specialty in each of several fields which it is not likely that the person will acquire at the undergraduate level. I'm talking about real depth comprehension of sociology and political science and engineering which is a little hard to get at that level; architecture is a little hard to fit into a liberal arts college. I do think that you have to have it at both levels.

ARLT: We always have a tendency to blame the undergraduate colleges for our shortcomings; especially the undergraduate colleges have a tendency to blame the high schools. There is some justification toward this point of view. There is definitely too much undergraduate specialization in some areas. Now I mention particularly chemistry because I know what that situation is like. In almost every institution the freshman begins to specialize in chemistry. By the time he gets out he hasn't had time to do anything except a vast amount of chemistry. He's a specialist when he gets into graduate school. As a result he is not an educated person, he's a trained person and probably by this form of training we have developed the finest specialists in the world in certain limited areas and at the same time we have succeeded in turning out the most uneducated persons in the world in a broader sense. Now we can't change the undergraduate colleges beyond a certain point. We can do this, however. The graduate faculties will be willing to say we would rather have our chemists come in with a little bit more social science and a little bit more humanities and a little bit more of a general education than having them begin to specialize in their freshman year. We may be able to do something in some colleges about that. This is a very very tough problem. On the other hand, there's some professional areas that insist on general education. I'm talking about law school, for example. To some extent now medical schools are willing to accept people without the kind of specialization they used to insist upon a few years back. And certainly in the field of business administration--many schools of business administration would rather have a graduate from the field of history or political science than somebody who's had four years of undergraduate business administration. But in these hard science faculties we haven't gotten to that point yet.

UNIDENTIFIED PERSON: We do not have a graduate faculty at my institution, but we are in the process of organizing one at the present time. The question was raised: Would it be possible to organize a graduate faculty along the interdisciplinary lines instead of in the colleges or in the departments? Has anybody tried this and what was the outcome? What I'm implying is, for example, we have, say, a graduate faculty made up of several coordinate faculties such as the faculties of environmental science. You might draw it from biology, geology, even sociology and political science.

ARLT: I think that this is a very fine idea. In connection with this long drawn out study of graduate education in the United States, I've asked everybody in the conference to write me about a five page commentary on what he has heard and what he thought the solution would be. And one gentleman from a large graduate school said the first thing we have to do is to abolish all departments, and then start over again on an interdisciplinary basis. Now he was a little rough in the way he said it, but I think there's something in this and particularly in the situation that you have now. You are in a good position to try something of this sort. I am not entirely in favor of graduate faculties, having been brought up in institutions which never had a graduate faculty and having seen the operations of places like Yale and the University of Chicago which do not have a graduate faculty either. Universities get along pretty well without an organized graduate faculty. But if you think you have the need in your institution for the establishment of a graduate faculty, it is much better to develop it on multi-disciplinary and on interdisciplinary lines than to perpetuate the cancerous growth of undergraduate departments.

PAGE, Council of Graduate Schools (Iowa State University): We have a very small graduate faculty and the fact of it is that I don't think very large graduate faculties are necessary to do what you're talking about. Our graduate faculty is not structured by the colleges and everything that we do we try not to lose sight of the fact that these members of the faculty represent themselves. I am different from Gus, I feel very strongly about the development of a strong graduate faculty and I certainly would encourage you to do everything you can to make up a graduate faculty across the entire school because an interdisciplinary graduate faculty never represents a department and in this way it encourages people in their work. I think it works very well; at least it does for us.

UNIDENTIFIED PERSON: I'll preface my question by a comment if I may. The Irish have a delifhtful way of identifying family relationships. This is your second cousin twice removed from your uncle John and my concern is that the Master's with this D.A. program will be lowered from a first class cousin relationship to a second class. My question is: Could the Master's be incorporated into a general education bachelor's special fifth-year and sixth-year Master's program which would offer some salvation to the Master's? For over a hundred years we have been concerned with the status of the Master's degree and nothing has come through yet at this meeting and perhaps will not for the next hundred years. Is it possible to look at the broad picture, the broadening of the background of the people by interdisciplinary approaches and give them a broadening at the undergraduate level and then start the direction toward a Master's with research and to give them a handsome option if they really like the research to go for a Ph.D., and if they want to be teachers to go for the D.A.?

ARLT: The Master's degree should be rehabilitated. It just simply should be improved. Not just beefed up, either.

REES: I have a feeling that's an insulting question this time. I do think that the combination bachelor's degree and Master's degree is a fortunate one particularly since you are out to get the ablest young people to commit themselves, but I think, at least from my own experience, that they don't tend to be strongly interdisciplinary. They tend to get through with the specialty early on and I confess this is the first time I've heard the idea that this kind of combined degree might be the answer. It seems to be much more likely the way it is practiced in my institution and the ones that I know about, to get the student oriented the way Gus said you shouldn't; go deeply into a subject so that you get a very strong Master's degree and you probably get the Ph.D. in two more years. It's an interesting idea that we could build that way, but I haven't thought about it at all.

REYNOLDS, Colorado State College: A practical administrative question that was just touched on then we kind of glossed over it, is the matter of the department. It would be wise, I am sure, to abolish departments often, but impossible in practice, I bet. As you move into interdiscipline and into multi-discipline and so on, how do we face up to the problem of promotion, of increments, of retention and this type of thing? Also, the discussion among one's colleagues in one's own basic discipline? Does anyone have a solution either from the panel or from the floor? I'd like to hear it.

BRAGONIER: I agree with what Dr. Page said. I was on the faculty there for a number of years before I joined the group at Colorado State. I don't like what Dr. Arlt said in part. I believe he was kind of jabbing us to respond. To throw out the baby with the wash water isn't going to solve the problem--the health of the child. The problem here is not an either/or; you either have departments or you don't have departments; it seems to me we need departments. We have to have departments as administrative units. Now slavish obedience to departmental dictation is what we're against. And this leads us to all kinds of frustration at the graduate level. This isn't necessary. It isn't mandatory that just because we have departments we have to do this sort of thing. Therefore, interdepartmental committees, inter-college committees, charged with the responsibility of managing the program of graduate students whether they be strictly interdiscipline or in between disciplines or in between large areas. Out of this comes broad programs for the student and that's what you're after. You don't care what the name of the program is, did the student get a program of breadth which will enable him to move into a position and do a job? That is, I think, what Dr. Rees was saying in this broadening effect you see. You can accomplish it with the departments. You don't need to throw them out, but if you abide by their dictatorial decisions on some cases you have to get around the department head and if graduate deans haven't learned yet how to thumb their noses at department heads they darn well better.

REES: This is precisely the point, of course, that I was referring to. I think it's interesting that two quite different groups quite different in approach as well as in subject treatment came to the same conclusion at about the same time. This is not a terrific problem.

UNIDENTIFIED PERSON: I just wondered if you would elaborate a little more, Dr. Rees, about how the faculty members of this interdepartmental or inter-divisional school you're talking about at the graduate level would be treated.

REES: Oh, it is a separate school under its own budget, its own procedures, its own promotional authorities so that the political scientists over there would not be judged by the political science department, but by his colleagues in the school.

UNIDENTIFIED PERSON: Would he divorce himself from the department of political science? Temporarily, permanently, or what?

REES: Obviously a member of the faculty has some right to move around, but his tenure would be in the school so that he would be judged by his interdisciplinary, multi-disciplinary colleagues, not by the people over in political science. I raised this question to the Chairman in the Political Science Department. But in mathematics we've been asking about this kind of thing for years. I used to carry a torch for fine mathematics and the standard way a department of mathematics judges an applied mathematician is to say, "Is he good enough to be elected to the National Academy as a pure mathematician and does he do significant things that apply to mathematics?" The result of this was that at one point in history there were ten universities offering the one man in the United States that satisfied these requirements a job. I know this thing from a very intimate association.

SPRINGER: We're talking about changing patterns. One of the theories expressed this morning in another meeting had to do with the decline of and support of fellowships. I wonder if our two distinguished panelists would address themselves to this possible question that may face us all sooner than we like. Let's say it keeps declining. I think we all more or less adhere to the notion that you have to have at least a small core of graduate students to fully support a full time student no matter how many part-timers you may suffer or welcome as your outlook on life may be. But what would happen if there were no appreciable support other than the teaching assistantships we could get presumably for a job to be done? What is really terrible underlying the quality of graduate education to have a graduate school that is let's say 95 to 97 percent part-timers? And relate this also to the whole question of continuing graduate education.

ARLT: I think you've heard me talk at some very considerable length about what I actually see as the eventual future of graduate education which, of course, has to do with continuing education going on through long periods of years and perhaps through all of life so that a student at some point in his career up to which he has been a full time student will receive his degree, and then continue his education throughout the rest of his career through what we now call continuing education or adult education. I'm not talking about some of these adult education courses excellent as they are in many cases. I am talking about continuing education in the specialty of the highest kind of the level. I think you're just going to have to resign yourselves to having part-time students. Right now 70 percent of all graduate students in United States universities are part-time students. We still think or at least pretend that we don't like them, but we have to live with them. At the University of New Mexico, perhaps in a more fortunate position than let's say Temple University. In Philadelphia, or New York University or places of that sort they just simply have to live with the part-time students. What you've seen up to this time of part-time students is nothing to what it's going to be fifteen years from now. That's the future of the graduate education in America.

SECOND GENERAL SESSION

Theme: "Changing Demands Upon Graduate Education: The Graduate School and Ethnic Minorities"

Presiding: George P. Springer, University of New Mexico

INTRODUCTORY REMARKS

George P. Springer
Dean, Graduate School
University of New Mexico

I am afraid that our panelists are not always here on time. We face that situation right now; nevertheless, I think we shouldn't keep you waiting longer. So we'll get started before some of our colleagues come in. I think they may have gone over campus and run into a traffic situation. As they come in we'll introduce them and they will take their turn.

The panel that you see before you consists of people who one year ago were appointed to work on special problems of graduate education as they relate to the needs of ethnic groups and also to the needs of ethnic programs. The committee very much with the help of WICHE, the Western Interstate Commission on Higher Education, has worked very hard to analyze the situation, to write up these findings, and to present certain points of view. I do want to emphasize the depth of gratitude that WAGS owes to WICHE. This morning a reference was made to the fact that WICHE stood at the cradle of WAGS. I think ten years later they are still standing by us and without their significant help we couldn't have put this volume together. Speaking of which I hope that you have your copy of it. Pat Snyder, the young lady whom I hope to introduce to you sent this out about a week ago. It's entitled Graduate Education and Ethnic Minorities and we hope you had a chance to at least glance at it if not read it line by line.

The plan for this afternoon is for participants to this volume to refer briefly to their statements for the benefit of those of us who didn't have a chance to read it; but just reiterate the main points that were made and then to lead a discussion if there's enough time. I was interested and pleased to hear our two keynote speakers this morning refer to the need for new organizational patterns, and I think our ability to think in terms of new organizational patterns may be tested by some of the things that we will come around to this afternoon.

In a way you might think of this panel session as the report of a committee which you appointed a year ago; but rather than put it into the business session tomorrow at lunch we thought you ought to take more time mainly this afternoon to deal with these questions that we have in mind. With this much said let me proceed to introductions and I will start on my right: Hazel Love, Coordinator, Graduate Opportunity Programs, University of California, Los Angeles; next to her Michael Trujillo, Student, School of Medicine, University of New Mexico; next to him Dean Phyllis Watts, Fresno State College; and on my left Dean Wendell Bragonier, Colorado State University. I will introduce the others if and when they show. Our first speaker will be Dean Watts.

INTRODUCTORY REMARKS: GRADUATE EDUCATION AND ETHNIC MINORITIES

Phyllis Watts
Dean, Graduate Studies
Fresno State College

I was very much interested this morning to hear twice that we are producing more Ph.D.'s than we have need for. The area we are talking about today is not producing more Ph.D.'s than we have need for. There is an intense shortage of persons to man the undergraduate programs in minority education. So we are not talking about anything that is in oversupply at the moment.

I would first like to tell you just a little bit about how this committee worked. We met first in Denver, after having had the luncheon session at the last year's WAGS meeting, to see whether there's something that could be done. Partially on the prompting of Dean Magoun who called several of us and asked if we didn't think that the WAGS should be undertaking a study of minority education. As a result of his calls and the promptings of others, I believe, we did have a luncheon meeting sponsored by WICHE ~~at~~ the last WAGS meeting to decide whether there was something we should be doing. We had several of the minority representatives who were at that WAGS meeting sit with us and we had rather a brain storming session and finally decided that it would be a desirable thing for WAGS to undertake a study. A resolution was drafted, and voted on and approved at the last WAGS meeting setting up a committee to look into graduate minority education for the purpose of making some recommendations and a review of some specific situations. Then in the spring we met in Denver with the excellent support of WICHE both financial and in a great amount of labor. Pat Snyder to whom George referred had prepared for us a compilation of graduate opportunities in the west for minority students which we found so very valuable to the committee that we decided to send it out to all of you last spring. I assume you all had received that and enjoyed it. Then in September, as a result of the determination in our spring meeting that if we were going to do anything very revealing about minority education, we should have a very heavy input from the minority students themselves and from the minority faculty themselves. So in September there was a workshop in the Berkeley area to which we invited nine minority representatives. Eli Risco who will be on this panel was the chairman of the group, Ysuf who will be reporting with Eli today was in the group and there were seven others who contributed ideas that went into one of the papers you will be hearing today, and one of the papers in this volume. Then, again in the fall we met in Denver with the assistance of WICHE again to go over drafts of the papers that had been assigned to various members of the committee and to decide what we would most probably do at this session.

The whole experience was an exciting one. I think each of us came from these meetings, these opportunities to have two days of hard work sessions with minority representatives, with different kinds of new knowledge. I'm going to share with you some of the insights that I think are my most valuable gleanings. It seems as I look at what I learned from this group that one of the reasons we've the shift which is occurring right now, social revolution call it if you wish, is that it involves making some very great changes in attitudes. Attitudes which are very very outstanding. It means looking at and recognizing the fact that some of us are holding convictions which are so definitely opposed to our verbalized concept of what the American ideal is all about that we just can't even bring ourselves to admit that we are holding these views. It means recognizing and admitting to the fact that many of our very natural habitual behaviors are in effect as viewed by the minorities evidences, instances of discrimination and prejudice. It means looking at the fact that the American idea that anyone who had pride and incentive and works hard enough and is sufficiently self-disciplined can make it in our society. It involves looking at the reverse of this: that anyone who doesn't make it is in fact lazy, unmotivated, undisciplined. It involves considering that the minority groups, the immigrant minority groups, who are so frequently held up to us as evidences of the fact that you can make it in the society without special help really came from a very different kind of background. They came from societies that had great numbers of models of success politically, economically, culturally, and in all manner of ways; whereas the minority of whom we are talking today have a very different kind of model. Their model, for the most part, is a model of a laborer and when the educator, the employer, the person in government, sees some of the physical characteristics, he often tends to react in terms of this model and not to see the potentials, the possibilities, that are there. I learned in these deliberations that the drive for separatism that seems to be frightening so many educators is really a drive for, a search in itself for identity, a recognition that many of those who have — "made it" —are people who have had to give up their own identity and assume the characteristics of the dominant society to the point of almost separating themselves from their own community. And the drive for separatism as I hear it now is something I would like to read because I have checked this out to make sure that I am reporting it accurately as some people see it at least. Their saying was:

> *You've never heard reviewers to make equality a fact. And you haven't done so well. We are tired of waiting for you.*

> *Let us try without your standing over us and telling us what to do and how to do it. Let's us exercise our own energy gift. We have some individual values and some techniques that might be of value to you. We do not want to give up our own communities in order to be successful in yours. We want to deal with you as equals in a partnership with each partner contributing his special talent in solving our joint problems.*

I don't want to take any more time from our panelists, but rather give you an opportunity to hear more as they report to you what they are believing and doing and thinking. Thank you.

George P. Springer:

Thank you Phyllis. Let me now introduce our two additional panel members. On Wendell's left is Ysuf Kaurouma who is a Doctoral Candidate in Economics, the University of Colorado. On his left is Eli Risco-Lozada, who is the Chairman of La Raza Studies Program at Fresno State. Eli, would you like to introduce your friends whom you have brought from the campus here?

Eli Risco-Lozada:

We have a system of protocol. I wouldn't feel comfortable being here in Seattle talking about the problems of minority education if some of the people concerned locally wern't present. So I asked for permission last night and there's some local students here. There's Meadows, Tony Schuler, Lupe Garcia, Ted Martinez, Thomas Martinez. They are from the University of Washington and they are graduate students. Thomas Martinez is also teaching in a new program.

George P. Springer:

Also, as both Phyllis and I mentioned, the key person in this whole endeavor is Pat Snyder, in yellow. Won't you stand up Pat? Our next speaker is Wendell Bragonier.

MINORITIES AND GRADUATE DEANS COMMUNICATE

Wendell H. Bragonier
Dean, Graduate School
Colorado State University

My assignment this afternoon is to tell you a little bit about the discussions between the committee members and the consultants and what we achieved. We were together twice for a day and a half. At each of the meetings the time went far too rapidly because everyone had so much to say and there were canyons of misunderstanding that had to be crossed and rivers of doubt and suspicion that had to be bridged, if our accomplishments and understandings were to have meaning for us and others.

First, help me recreate for you some of the moments when the atmosphere in the room became almost super charged because real understanding was being reached. Moments when we pushed aside the walls of darkness and doubt, distrust and misunderstanding that seemed to overwhelm us at times. The longer we worked together, however, the more frequently we experienced these moments of clarity and the oftener we achieved true understanding. The last day we met on Saturday, November 15, 1969 seemed to be so filled with these moments that we could scarcely believe what was taking place. For example, we were discussing "ethnic studies programs." Several made such meaningful statements that I felt truly inspired by the potential such programs might hold for all people. Hazel Love, Eli Risco, and Ysuf Kaurouma were stressing the importance of ethnic minorities participating in the building of such programs; and that minority members must participate in the selection of individuals to teach these programs. Not in any dictatorial sense, but rather to insure that the programs develop the depth and understanding necessary for students clearly to understand: "community responsibility," "commitment to community goals," "development of basic skills," "awareness of and dedication to community needs." Each of these was discussed, opinions were exchanged and slowly there developed through the occasionally heated exchanges between George Springer, Lawson Crowe, Jim Ragin, Ernie Patterson and Pat Snyder a greatly improved level of understanding. Phyllis Watts and I listened, mostly, asking only now and then for clarification. Once in a while we tried to restate a point in a way which had meaning for us, but which may not have been the meaning intended. Never have I been in any learning situation that contributed so much to my own personal development and understanding as the morning session on that day. All of our periods of discussion had some moments like this but never had we experienced such a long period of excited, but kindly, meaningful exchanges which led to even greater insights. To have been a listener only, would have been tremendously exciting and valuable; but actually to participate and to share fully in the moments of clear insight and expanded understanding was for me a truly mountain top experience. I believe all felt to some degree the excitement and intellectual stimulation that impressed me so deeply.

Perhaps the materials sent to you prior to the meeting conveyed some of our ideas and feelings. We sincerely hope they did. We hope the discussion this afternoon will enable us to share some of our viewpoints. There are many problems associated with making graduate education readily available to ethnic minorities. No one has all of the answers and there are no magic courses of action that will achieve resolution of all of the problems. The white community and the ethnic minority groups will need to work together if they are to achieve the "good life" and provide equal opportunities to all.

Basically there is little that is really new in the philosophy which underlies possible action programs that may develop. The "new" consists mainly of clarifications of common goals, achievement of expanded understandings of the significance of the philosophy underlying the approaches, or an increased appreciation of the urgent need for appropriate, truly cooperative action programs led by dedicated members of ethnic communities and their equally knowledgeable and dedicated neighbors. Hopefully ethnic studies programs, for example, will spread knowledge, and understanding so that the problems will be solved. We hope such programs chosen, organized and taught by ethnic minority personnel with the breadth of understanding and commitment necessary will achieve the goals set by the ethnic communities and their neighbors.

We invite you to participate in the discussion. We hope you will experience some of the excitement we have shared. We sincerely hope everyone will leave this session with a significantly enlarged understanding of the need for and the characteristics of graduate education for ethnic minorities.

I shall close my remarks by quoting from Edna St. Vincent Millay:

"The world stands out on either side no wider than
the heart is wide;
Above the world is stretched the sky, no higher
than the soul is high.
The heart can push the sea and land farther away
on either hand;
The soul can split the sky in two, and let the face
of God shine through.
But East and West will pinch the heart that cannot
keep them pushed apart;
And he whose soul is flat the sky will cave in on
him by and by."[1]

---

[1] St. Vincent Millay, Edna. Renascence "Collected Poems," Harper and Row. Copyright 1912, 1940.

George P. Springer:

Our next speaker is Eli Risco-Lozada. Are you ready?

PHILISOPHY, OBJECTIVES AND GUIDELINES FOR MINORITY EDUCATION PROGRAMS

Eliezer Risco-Lozada
Chairman, La Raza Studies Program
Fresno State College

I hope you've all read the portion of the report that even the statement of philosophy was a collective enterprise. This I think was heading the results of the workshop that we had in San Mateo in which about twelve people were involved. The names of the people and who they are are listed in the report so you can get an idea. Most of the sentences and most of the paragraphs which you will find in that report you will find in the individual notes that were made of that two day session. What I'm going to try to do this afternoon is not defeat the conclusions made there, but put them in their logic context, give you some of the formal preferences that we developed in stating the kinds of things that went into this report. Because of time, because of space, because of many other things, not everything was included in that report and some of it Ysuf Kaurouma will try to address himself to later.

Now something that we feel that we have to spread to college administrators is that we are perfectly aware that minority education is political education, a type of political education and politics not in merit status even but a merit status of whether we can get enough votes to the legislature to allocate more money for fellowships, scholarships for minority students to get into graduate school. Where does minority education in institutions of higher education in the U.S. today get financial resources? Spiritual resources? Something that we became aware of at Fresno State College where I work recently was of a great peculiar nature. The President of the school made some statement in public that maybe there would be no minorities program the following year because the legislature wasn't going to allocate any more money. We looked into the records of the financial aids office and we discovered that only 11 percent of all the monies that the school had for financial aids came out of the state legislature. So that when he was saying that maybe there would be no minorities program what he was saying is because that 11 percent of the total resources are questionable for next year maybe we cannot have minorities coming onto the campus under the in-looking program. What happened to the other 89 percent? Now we know that we have to contend with the football teams and the band and the school of agriculture and every other portion of the campus in the allocation of those resources for financial aids. And not only those resources for financial aids, but status formula, and administrative decisions and every other item in the development of the annual budgets for the schools. Now that's a political issue that like the issue of whether the increase in salary and in wages from one year to the next is going to be 30 cents or 35 cents or 50 cents is a negotiable item in terms of labor unions and money. And it is possible at any point to sit down and collectively bargain with the administration on those points. Now that's the kind of thing we are very aware of and that we know the administration is aware of, but we resent the many times administrators tried to face the problem of minority education in that context alone, because when we're talking about minority education we're not asking about whether we get 25 or 30 new scholarships for next year. That's only one of the details that gets settled after people decide they've got a commitment to minority education.

Now when we're talking about minority education we're talking about two other things. And I will try to briefly describe to you how we see them. We're talking about a kind of education that I will call polistic education. And we call it polistic because we think that institutions of higher education and most of education in the U.S. today is played by a series of crises. And I don't suppose I have to explain to you what happens at the free speech movement in Berkeley, what happened in Columbia University and what happened in Santa Barbara last week. I don't think I have to explain to you what has been happening in education over the last ten years. Now if those kinds of issues affect all of the students in higher education today they affect minority even to a larger extent. Why do any class of students feel that education is not relevant even to them? Now minorities that find themselves in a society in which they don't really belong in any real participating sense but in which they have been relegated to separate marginal people, they now seek for education as one of the areas in which may be negotiability of some degree of real particpation in what some people would call the dream, the American dream of democracy, but that some other people would call other kinds of things. We find that minorities find themselves in a situation in which institutions have been bureaucratised to the point that administration of these institutions can find an infinite number of loopholes and an infinite number of escape hatches not to grant those things that minorities are asking for. And those loopholes are basically part of a fragmentation in which if a student is interested in counseling he has to go to an office and a committee and an administrator and another committee and another administrator to the point where pretty soon he gives up and decides that he's going to just hustle. It isn't difficult for him to hustle because in the past he is used to doing that in his own neighborhood. But when it comes down to the issues that have to do with the purpose of institutions that are supposed to be education, then it is a little bit harder. You can hustle a degree, you can hustle grades, you can hustle a diploma, and the students have an indoctrination in depth in this because of the condition in which higher education is. But he can't hustle an education. So that in most of the programs that we are trying to develop in and get with the studies we are trying to deal with the question of how to re-develop in the midst of an institution that is fragmented, in which the faculty finds itself powerless as against the political realities, and powerless in relationship to the administrations of the schools in which the administration finds itself unable to deal with the crises of the campuses. We're trying to, in the midst of that institution, develop a kind of program, a kind of situation in which the student can be looked at as a whole person--as a person that is in that institution to acquire an education. In the broader sense, and also in the specific sense of the skills, and in the specific sense of having a set of needs that are support needs. But all of those can be looked at as the responsibility of a set of committees and a set of faculty and a set of administrators but they have to be looked at in the context of the program they create and the environment in the campus in which people can actually get at the business of acquiring education. And when you begin dealing with how can you set up programs like these on campuses we find that it's difficult because of the easy way out by saying "Well, there isn't anything we can do about it." We are submerged in the shadow of organizations within the campus in which some people know how to be an axis to decision making, but those are preserved for the in-group and minorities find themselves knocking at doors that don't open, knocking at doors that open only if no power is inside of those doors, if no power for decision making is inside of those doors. And you know that is the problem that we face in trying to develop these programs in the campuses today. And how do we break through the bureaucratic hassle that is the academic way and that faces the colleges in trying to develop these programs?

But basic to the kind of education that we want to develop and that's why we insist on trying to develop this polistic approach to these programs is we're trying to develop an education that I'm going to describe in the same way that a Brazillian educator who at present is in charge of the educational programs for the World Council of Churches has defined them. There are two kinds of education. One he calls education for domestication and the other one he calls education for the duration. At this point minority education is very political in a deeper sense. But it has to do with the nature of education and the relationship between education and society as a whole. The worst thing is that we don't want necessarily to have more people of color, more spiritual people, have education rather than diplomas. But that by itself doesn't have any meaning. That in itself doesn't happen to programs that we have in your community. That what we're trying to develop is a system of an education in which a student sees himself as involved in a program that involves his community at the same time. Now that process is a process in which he personally and his community collectively is engaged in the process of liberation. And that process of liberation involves necessarily all of the conflicts and all of the problems that go with what involves individuals actively in the movement for liberation in the faculty community and the movement for the transformation of educational systems on campuses. And we don't see this education for liberation as having an exclusive beckoning character. We see the need for the transformation of educational institutions as something that we have to do because minorities are usually left out from all of the relevant aspects of all of the discussions, all of the decision making and all of the educational resources that goes on in higher education. And that's why we try exclusively to deal with that issue.

But we see that issue and that process as having not only to do with minority but having to do with the students as a whole. I don't think that we feel ourselves as being separate from in any way this trouble of the students who are in different kinds of courses, from the students fighting against the IBM computers, from the students fighting against the registration lines, from the students fighting against every other area of education in which students actively have been involved. I think we'll look deeper and in a minute we'll see that the fight for students to participate in the problem of decision making in the university is an issue larger than that of minority education. We also deal with the question of minority education almost exclusively because we see the minority community, our community, as having basically a different way and functional relationship in society than the other students do. It's a totally different process of liberation than has to take place for people in urban areas and the ghetto and the rural areas in the U.S. as that kind of integration that must take place in suburbia. Suburbia and urban areas and the ghetto are counterparts in a social, economic and political system that is an oppressive one. We have to begin with those issues because mainstream sociologists, and psychologists, and political scientists and economists are not going to deal with them. Mainstream sociologists are not going to deal because they are unable to with the kind of education that exists in the slums and in the ghetto. The psychologist is the same way. With educators it's the same way. And what we're saying is that you have to and my students have to and my faculty has to deal with the question of education for liberation and polistic education because you have a need to survive. But the time has come when administrators and educators in institutions of higher education have to realize that the kinds of problems that we have to deal with in our communities and from our students are basically of a nature different from the ones that you have. And we have to begin by using formulas for developing the kind of education that is going to educate our people and not merely domesticate them in the traditions of the white middle class society that even a student finds more and more difficult to be a member of. And that's basically what we're talking about. That we need to develop an education that at last people can be human, and that allows for real development to take place in our community. Thank you.

The next scheduled speaker, Ysuf Kaurouma, Doctoral Candidate in Economics, University of Colorado, presented a paper entitled "Philosophy, Objectives and Guidelines for Minority Education Programs." He has requested that his speech not be published in the Proceedings.

George P. Springer:

I think it would be best if we just wait for some coffee because I suspect that you are like myself, you've had all the coffee you can consume today, but if somebody's really hard up for coffee as we go along perhaps you can sneak back there and grab a cup. But let's go ahead and then have an organized break and then come back for panel discussion. Our next speaker is Hazel Love, Coordinator, Graduate Opportunity Programs, who's going to talk about one of the old timers of these programs, the prototype.

GRADUATE OPPORTUNITY AND SUPPORT PROGRAMS

Hazel Love
Coordinator, Graduate Opportunity Programs
University of California, Los Angeles

The main purpose of the paper I was assigned to do was to record the progress of a minority graduate program which has been ongoing for some years and hopefully to provide some insight for those of you who are planning to initiate such a program. However, between last night and tonight, it became apparent that some of you may be interested in the current statistics of the program, so rather than read the paper I think I'd like just to tell you briefly how many students there are and what they expect to attain.

Currently in the doctoral program there are 40 students. This is a program which started in 1968. There are 40 students with from two to four years of support. There will be a minimum of 20 added to this figure in the fall. At the master's level there have been a total of 121 students since 1967. There are currently 100 participating with a minimum of 60 to be added this fall. Of total 121 two dropped out and 2 will require another quarter, and 17 have attained the Master's. In addition to these figures there are 95 minority students in the School of Law in a support program. Of the 40 students currently in the doctoral program, 10 had originally been involved in the Master's program and moved up from the Master's to the doctoral.

There is a new development in graduate studies at UCLA and that's the addition of two associate deans in the Graduate Division. They will devote themselves to new activities, mainly to recruitment, fund raising and student admissions for minority students. Curriculum planning and student counseling will also be areas in which they will function. As a result of the addition of the two deans, we now have 581 applications for admission; 208 of these are for doctoral studies and 373 are applications for Master's programs. At this point I would welcome any suggestions regarding additional funding and would be happy to give you the names of the deans who are involved in fund raising. Any suggestions from federal guests here regarding sources of funding will be most welcome.

George P. Springer:

Mike and I've been trying to latch onto some facts related to Indian graduate students, not only in New Mexico but elsewhere in the West, and we've had our problems as those of you who read our paper discovered, but in the meantime since we wrote the paper one of our own graduates from our institution who got a doctor of education degree has sent us a new volume of statistics which emanated from the Civil Rights Commission of the Office of Education or HEW I suppose I should say with some additional facts and I think Mike will make a brief presentation to you on these new facts. Mike.

THE AMERICAN INDIAN STUDENT

Michael Trujillo
Student, School of Medicine
University of New Mexico

This is the report referred to by Dean Springer which we received too late to include in our study. I will refer to it at the end of the speech. (Showed copy of Civil Rights Commission Report.)

Minority programs for ethnic groups are becoming the selling point for a number of universities and colleges at both the undergraduate and graduate levels. These institutions emphasize how many students are being supported fully either by outright grants or assistantships. This is all fine and wonderful. At least these institutions of higher education are realizing that there are minority groups in the American population which must be brought into the mainstream of knowledge. I can only stress the point that far too few have adequate programs of funding and, the old cliché, relevant studies. But, at least this is progress. After your 200 years on this continent, there should be progress.

When dealing in numbers and ethnic backgrounds of the students supported by these programs, the foggy picture of good public relations begins to clear. One university, when looked at closely for example, says: "We support 20 Blacks and 10 Chicanos." Another might say that they have 10 Blacks, 7 Chicanos, and 25 Chinese from Taiwan. Finally, one will say that they have 15 Blacks, 20 Chicanos, with their programs in Black studies and La Raza studies. And they might also say that they have one American Indian and also an Indian studies program. They probably study the Indian!

These fictitious examples only point to the fact that the Indian population of America is in the far background of the minority program picture. Far too many times this minority group has been overlooked. When one thinks of minority group programs in institutions of higher education, one is left with the impression that these programs are for the Blacks and Chicanos. No stress is placed on the fact that Indian students should also be considered to share in the meal. Perhaps we are unnoticed because many of the Indian groups are non-violent. That was not always true, if one reads unbiased American history closely. Just in the past few months some of the national magazines have discovered the American Indian! That seems a bit strange. I've always been around, and so have my people. Even before you.

Perhaps the picture is changing. Some of the Indian youth are becoming more vocal. Alcatraz has become a rallying point for some and, in fact, a recent survey conducted privately on what Americans and the present administration should do in regards to Vietnam revealed a few unreported facts. Of the Indians who responded to the survey, five percent were in favor of staying in Vietnam; fifteen percent were for withdrawl; and eighty percent stated that non-Indians should withdraw from America!

The task force of Dean Springer and myself set out to define the number of Indian students, both undergraduate and graduate, in Western universities and colleges. After some debate, it was decided to work through the Bureau of Indian Affairs. While the Bureau was cooperative, it must be asserted that the results of the survey can in no way be regarded as complete.

To begin with, there is no standard form in which the field agencies are instructed to keep count of Indian students. Secondly, the offices keep count of students whose scholarships they are some way responsible for. They do not keep count of Indian students supported by a tribe, or by another federal or private agency. It is understandable that the figures collected reflect perhaps less than half of the total number of Indian students in undergraduate or graduate studies. Nevertheless, the figures can offer some value since they do indicate certain trends.

Of an approximate total of 1430 students, fifty-four percent are freshmen; twenty percent are sophomores; thirteen percent are juniors; eight percent are seniors; and two percent, or thirty, are graduate students. These data suggest that a drastic dropout takes place between freshmen and sophomore year. A second conclusion that might be drawn is that once an Indian student becomes a sophomore, his chances of graduating are roughly one in two. Clearly, survival in freshmen year is a major problem.

While there are marked preferences as to academic fields among Indian undergraduates, no such preferences are evident among the handfull who continue into graduate and professional school. Among the undergraduates polled, 440 of the 1400 were in education and 230 in business subjects. Among the arts, humanities and social sciences, which are moderately favored, certain individual fields seem to stand out. Fine arts and sociology, nursing and the engineering fields are reasonably well represented while the basic science majors total less than the undeclared majors. In this break down it must be realized that given a distribution in which freshmen constitute more than half the total number of undergraduates and graduates counted, the so-called majors are at best declared or hoped for concentrations. They cannot be regarded as firm except for those 340 out of the 1430 who are juniors, seniors, and graduate students.

One other number just happened to cross my mind. I've been going to Medical School at the University of New Mexico. I am interested in the area of Indians in the medical fields. In the Western states, there are approximately 2 Indian students enrolled in medical school. One is enrolled at the University of Colorado and myself. There are several pre-med majors who are freshmen. The American Medical Students Association reported in their magazine three months ago that there are now thirteen Indian doctors now practicing throughout the United States.

Given the highly tentative figures, it is reasonable to conclude that more Indian youth are attending college. But the questions remain: Are scholarships the best of all ways to help the Indian students toward higher education? What are the realistic figures of Indian enrollment? How important are special counselors and programs? Which institutions are most successful in retaining Indian graduates, and why?

These and many other questions remain and should be energetically explored.

The report referred to by Dr. Springer was sent to us by a former graduate student at the University of New Mexico who now works in Washington, D.C. This report was prepared by the Civil Rights Commission for the Department of Health, Education and Welfare. It was compiled for the Fall of 1968 to represent undergraduate studies undertaken by minority students in colleges and universities throughout the United States. The report does not indicate how these figures were collected. These figures are divided into various groups representing blacks, Spanish surnamed, Oriental, and American Indians. There was a total number of 4,819,809 university students in the Fall of 1968 at the undergraduate level. Black students constituted six percent; Spanish surnamed students, two percent; and Indian students, 0.06 percent.

For example, the following brief rundown will give examples of how many students were enrolled in the Western United States and some of the "big-name" universities in the East. In 1968, there was one Indian student at MIT while Cornell had two, Harvard had one, and Columbia had forty. In 1968, there were 256 at the University of Arizona and sixty-four at Arizona State University. Indian students enrolled in California included 101 at Fresno State University; eight at Stanford University; twenty-eight at the University of California at Berkeley; forty-nine at UCLA; none at the California Institute of Technology; and 131 at the University of Southern California. At the University of Colorado there were fifty-five Indian students, and ninety-three at Denver University while the University of Idaho reported twenty-six and the University of Montana had eighty-eight. The University of Nevada had ninety-four Indian students while the state of New Mexico had three colleges with fairly high numbers. These included the University of New Mexico with 158; New Mexico State with 108; and Eastern New Mexico University with forty-five. Oregon State University had six, and Brigham Young University ranked the highest with 207 Indian students. The University of Utah had 123 while Utah State had five and the University of Washington had ninety-one while the University of Wyoming trailed with nineteen.

It is apparent that something has to be done for Indians in higher education!

RESPONDENTS AND DISCUSSION

CROWE, University of Colorado: I was listening to Wendell describe those meetings that we had this past year. From the nature of discussion I got the impression that, especially from the remark that he and Phyllis remained silent, that he was trying to tell me that I talk too much. I think that one of the things that came out of the little discussions was the fact that we found out again that people tend to see what they expect and that reminds me of the story of the two curious tailors who met each other after they had been apart for a long time. One said to the other "Where have you been?" He said "Well, I have been traveling." And the first one said "Well, where did you go?" The second Jewish tailor said "Well, I went to Rome." He said "Oh. you went to Rome. What did you do there." He said "Well, I met the Pope." The first one said "The Pope! That's marvelous! What's he like?" And the other one said "Oh, he's about a 38 regular." We broke down some of this parochialism I think in these conversations. And one of the things we discovered, and I think it has been brought out here in this discussion today, is that many of us are engaged in a variety of activities. We haven't made any effort to coordinate them among institutions and it seems some of us in our discussion that we might consider the possibility of doing something on a regional scale to try to assist in the development of education for minority groups at the graduate level. And therefore I would like to present to you this afternoon a simple and short outline of a draft proposal which you may wish to consider and one which I understand some resolution may be presented at our business meeting tomorrow.

This is a draft proposal from WICHE of graduate education for minorities. The proposal is that a consortium be established in recognition of the needs of the minority students for graduate education and in order to make the most effective use of the available resources. Therefore it is proposed that the members of the Western Association of the Graduate Schools and WICHE organize a consortium for the purpose of dealing with minority education at the graduate level on a regional basis. The main purposes of the consortium would be to promote ethnic studies programs at the graduate level, to identify and find support for members of ethnic minorities who will constitute future teachers for these programs, and to identify and find support generally for members of ethnic minorities who would otherwise be unable to undertake graduate and special training. The first purpose of the consortium would be implemented by establishing a clearing house of information, consulting and counseling services, and a data bank on available resources, support programs, etc., which consortium members would use in the development of ethnic studies programs. The clearing house would be operated by WICHE staff members appointed for that purpose. The second and third purposes of the consortium would be implemented by organizing a regional recruiting program designed to identify potential graduate students and to designate them as worthy of financial support. The consortium would then attempt to match such students with appropriate graduate schools where financial support was available. It is proposed that the director of the program who would be appointed to the WICHE staff for this purpose would organize appropriate regional committees of faculty members concerned with black faculty members and chicano faculty members who would review credentials of students and interview them. The director would establish in connection with the clearing house operation a network of faculty members at all four year colleges and universities in the western region who would serve as liaison to their campuses and who would presumably nominate potential graduate students from their student bodies. The identification program would be expected to encourage many minority group students to consider graduate study, it would organize significant numbers of faculty from four year colleges and universities in the interest of minority groups, it would provide role models for young minority group members, and, hopefully, it would bring about a more efficient distribution of available resources. It is expected that such a program should be organized to operate for at least five years. A substantial budget would be required to operate both the clearing house program and the identification program. A part of the funds could be provided by a modest annual university subscription. The better part of the budget would probably have to come from extra university resources. As their contribution to the program universities could guarantee a certain number of fellowships each year as well as providing the necessary counseling, vocational placement and follow-up services to the students involved. Faculty members participating in the work of regional selection committees would receive travel expenses and a modest honorarium. It is my belief that the organization and the operation of a consortium of this kind would strengthen our position with both federal and state governments and private foundations in our search for funds. This proposal is a draft. It is clear that the details would have to be worked out over some careful, thoughtful period of time. And, of course, I think it would be the case, too, that not all institutions would wish to participate with the consortium, but this would probably be offered on a permissive basis to those who wanted to participate in it.

SPRINGER: The idea sounds good. Who's going to prepare the resolution if anybody wants one presented? The only reaction I have to it if I may abuse my privilege here is why exclude assistantships? You talk in terms of fellowships and if my crystal ball tells me anything it is that in the future I think we may be better able to operate with service awards rather than non-service awards. Now our final program speaker is Ernest E. Patterson. Ernie, how does it look from the campus of the University of Colorado?

PATTERSON, University of Colorado: There was one of the ideas discussed last fall with the sub-committee meetings, and we kicked this around, that there should be some central manner in which we could locate the so-called minority students. If the resolution is introduced tomorrow it will be based on this: that this organization would try and work out some arrangement with NSCNS. This is National Scholarship Council for Negro Students. This organization is located in New York. They have a midwest office and a southern regional office in Atlanta. This organization has black students, some Puerto Ricans, some of our chicano students, some Indian students in over 1500 universities scattered throughout the country. The organization keeps up with the students for three years as undergraduates. In that fourth year the students are lost. In other words they don't want to graduate. Now no one can find these students; you don't know where they are; they're scattered in fifteen or sixteen hundred of our schools. I have discussed this with the president of this organization and I have had him contact WICHE and some other people and they have also discussed this. He is interested in our proposal; it would cause him to increase his staff by two or three people and he would need support from those who are interested in participating. Based on the size of the graduate school there would be a small fee for use of this list. But those students who are going to graduate say in mathematics, political science, history or what-not from the fifteen or sixteen hundred schools, would all be identified by academic area as such and in this way if you have some funds and say you cannot afford to have someone help you do some improving in your particular institution you would have access to this particular list. This would identify the students; you would know where they are studying and this type of information. The shortcoming of the information that the organization has on these students is they have nothing as to what his current college professors are saying. They will have records of information of these students, but this is what was said about him when he was a senior in high school, so this would be one major shortcoming. On the other hand this could be a very accurate list; you would be able to identify the vast majority of the black students and many of the chicano students who will graduate as well as some Indians. So if this resolution is introduced tomorrow this will be the essence of it: those that would like to participate and it is my belief that if as many as fifteen or twenty schools decide that they want to cooperate and inform the President of NSCNS that he will be willing to assist. In other words it is not something in which every school or every institution will have to participate. If as many as fifteen or twenty decide to participate, I think they will find this meaningful.

SPRINGER: We have a powerful array of talent up here and down there and a great deal of specialization I think and now we'll start the questions.

SHAO: I would like to suggest two points in this regard. First, foreign area studies programs have a great deal to offer to formation of ethnic studies. Oriental and Asian studies are examples. Secondly, I feel that this group and the committee should consider including an Asian ethnic program in its deliberation, especially considering that a large percentage of Americans are of Asian origin on the West coast and I think eastern parts are pretty integrated, also.

RISCO: With reference to the second point that you made, in the meeting we had in San Mateo Asian studies was included. And if you notice in the report that was printed, you know a third area includes Asian studies. Now as to the first point Chicanos like myself come from Latin American studies area, but this differs as we see it in terms of looking at Asian. The foreign student or area studies program as a model is different because that model was developed in specific ways and to do specific jobs and mainly the question is it deals with those areas in a way as an object to be studied. And if you go through most of the area studies programs, for example Stanford or any other place, most of the staffing of those programs is by people who have been trained in the U.S. and who are either European of Anglo Saxon. Now one of the problems about applying that model to the ethnic studies area is that it would be against the ethnic minorities to be seeing us, again, an object to be studied.

You are concerned with developing a mechanism by which the minority community through its members in the university begin developing that educational program. So in some way it would be more like American studies than like area or international studies. I don't know if I make a point clear. It's more like American studies than foreign studies or area studies programs.

MAGOUN, University of California, Los Angeles: I will agree that the subject and content of U.S. ethnic studies would doubtless differ greatly from that of foreign area studies. As well, I would offer the idea that the operational, staffing, and funding aspects of these, of introducting a major new subject area into American higher education might be a very comparable feature. Moreover, in terms of the general focus of these they are predominantly in the social sciences and the humanities and the arts as seems to me to be at least to a significant degree the same as the present. Many of the present U.S. ethnic studies fields, and to the extent that these are oriented toward Africa or Latin America or Asia as so many of the foreign area studies are, they do provide some background of the ancestoral lines of major population groups in this country today. And this does provide some background component of their cultural heritage and in these rather general respects, I would think that the foreign area studies model might provide some helpful background. And the more particularly, if one moved from it into the area of American studies which picks up this background and continues it upon the migration of the immigrant into the United States and follows him down into the situation of minority groups in this country today. So that I would feel that a combination of the two would work and I should add that the American studies fields similarly take off usually from history or from literature and move either into the social sciences in general or into the humanities and the arts; there is some differentiation apparent at this time. These again are in the same ball park, I guess is all I would say. The particular features that have been emphasized this afternoon of the need to apply the educational background that is acquired in these to the solution of group and community needs would certainly be a distinctive feature that neither of these two programs have; the foreign area and the American studies programs have previously emphasized. But not attempting to refer to the substance and content of U.S. ethnic studies and the special orientation that they doubtless should have in relating to contemporary society problems in this country. I think there are some features of a general type that might half way be considered in the formation of programs in U.S. ethnic studies and it was only in that respect that they were reviewed as models.

BRAGONIER: Let me try and see if I am hearing Eli just right. I understand him to say in brief: the model for ethnic studies in American colleges and universities, particularly at the graduate level, must have the input of minority group spokesmen, must be taught by minority group people, and must be designed around problems in American cities and ghettos and university areas. Without this it lacks the relevance, the vitality, that is mandatory for it if we're going to get the job done. Did I hear you right?

RISCO: Just let me point out something. American studies now is being expended through these programs I read about in urban studies. I think that urban studies type of orientation is precisely what we're talking about. It must spring from the community.

BRAGONIER: Yes. And in that sentence you see the Asian studies, area studies, black studies have a number of problems.

RISCO: There's always been a need for public role in the flesh which I think extremely important in the black community and the chicano community because they are talking about the integrity of an old ethnic and cultural community. It seems to me that culturally they will never be totally integrated into the mainstream, and I don't think they want it. In that sense I think a more sophisticated model of Asian study could be related to a study program of American-Chinese program. And that could serve with its limitations some kind of working model for chicano studies and also black studies. That I think is the important point.

SHAO: . . . I think I would agree with what you're saying. I think that the primary distinction is that on the one hand I imagine that the objective belief of the Asians studies is in part somewhat different than the objective of ethnic studies, U.S. ethnic studies. Our primary concern is that first of all some type of cultural identification with yourself, the people you came from, this cultural experience that existed over a period of years. I think the initial objective really is to somehow through the type of socialization that you would get, through the type of stoical learning that you would acquire, that you create really in the lives of those people, in the lives of those people who go to the university, a real desire to do something, to utilize the skills in the areas from which they have come. Now we recognize the large majority of the people, initially, are not going to be able to develop the types of things that are necessary for the community itself. We recognize that there will be several people who will still be going to IBM, and going to General Motors, as the case might be. The fact is, that for the first time we'll say that there ought to be some kind of identification, some type of socialization and not only that but the university itself, the university through participation of ethnic groups that the program itself ought to be set up. Some type of program incentives, and with advantages for the student that is concerned not only about himself alone, but for his community. I think there are programs now, I can't quote them offhand, that bring students to the university in the field of social work. Some provide scholarships in some areas of the country for various students and say if we provide a scholarship then you have to work for the social agency for two years. There's some type of credibility there. I think this is where the U.S. ethnic studies differ from the Asian studies. We not only want cultural awareness, cultural identification, but we also want to somehow objectively tie the resources and skills the student acquires in a university and bring it back to the community where the people live.

MCMURRIN, University of Utah: I came in late in the earlier session I am sorry to say and I may have missed this very important point but at this stage it is not entirely clear to me whether the discussion of a technically oriented curriculum here is a curriculum made available to the students at large of the university or is it discussion of curricula that are directed toward graduate degrees? It seems to me that this is a very important difference. It would be one thing, for instance, to have Asian studies and Black studies, etc., available in the university for students on what I would think to be essential on the undergraduate basis. Another thing, to have resources for separate committees on graduate studies for grading Black studies on graduate study, and American studies on graduate study. I am wondering if this could be entirely fair.

RISCO: Yes. You see they are somehow related. Every time that you have a new program developing, every time that you have a new funding like recently let's say the whole question of bilingual education. You have bilingual education being funded by the federal government and school districts acquiring funds for bilingual programs and at the same time immediately you run into the problem that who is going to be staffing those programs? It happens to be people who don't have the bicultural aspect of that bilingual education because they don't have it personally and because that area of study has not been offered in the university. And this is true, this happened in all of the programs in audio. This is why most of the programs in economic development in communities in the U.S. have failed. Because the people who are--might be--good professors in economics, don't know how the economics of that community functions. And they devise beautiful programs but then they are applied in the community on a practical level they fail, because they are models developed outside of that community that are being applied to a target population. And that's one of the things that we are saying ethnic studies has to solve. We have to begin developing models for doing things at a technical and at a programmatic level in the community in which the models developed are researched in that community itself. The question as to whether ethnic studies as an area of study will be available to the school population as a whole is another question that is very difficult to answer at this time. Because we are not ready at this point, even those of us who are engaged in developing ethnic studies programs, we are not ready to package that information into the kind of curriculum used for standard courses that give general knowledge. Because what we're saying is that we have a theory in which we have to deal mostly with a student coming from the minority community and do most of our work in relation to the minority community. And what we're saying is that we can't go on groveling to white Anglo Saxon protestant liberals. And we're saying these are problems in the community and package them into courses and say we're going to offer this for all white students on the campus. That would be classifying education. We have to do a lot of homework in the community itself before we can say here we have some knowledge that can then be administered broadly. And that's what we're saying; that at least for the time being our concentration has to be for the minority community and for the minority student.

MCMURRIN: Another thing, the main concern would be can we provide the graduate programs that are in these specialized areas? I would think, speaking in favor of the consortium, I would think it's entirely obvious that there are not very many institutions among us who could take on the whole thing and do it well. Maybe one or two. I would be very much in favor of some kind of a joint effort divided up equitably and see that it's divided up wisely. I have a feeling that there has been far too little cooperation among us. The general tendency among us has been more competitive than cooperative and we very often have moved into such fields as Latin American studies or Asian studies, especially these two, without very much attention being given to what resources would go to carry you far. Our effort should be based on cooperation of different institutions no matter what kinds of contributions the several institutions might make for these programs. And I think it is high time that we did effect a mechanism for real cooperation, seeing to it that we can get some kind of a system, a catalog of our resources and to do this thing in a manner that would bring on the best results. If we can find a manner rather than what sometimes proved to be a rather trivial result through independent action.

CROWE: I was going to comment on this. At the University of Colorado we are now developing a Mexican-American studies program which will lead to a Master's degree and in which we hope some of the research that has been discussed here today will be done which will flush out that program and give it greater substantive content than we even now see. The problem, though, when you come to staff such a program is that if a man is qualified to teach in it now he doesn't have the academic credentials. If he has the academic credentials now, he's not qualified to teach it. So this is another way of saying what Eli has just said that one of the roles of these programs is going to be to create cadre who will teach at these institutions in these programs. And so it's going to work both ways. It's going to be, I think, that we're going to have degree programs in these fields and the people who earn these degrees will be teaching in them.

BRAGONIER: In connection with this question right here the consortium plan, the WAGS-WICHE consortium plan will include provision for scholarship or fellowship continuation. Already employed Chicano, for example, or Black lecturers continue study at the graduate level. Once they're employed will this thing make it possible for them to use their credentials to continue their teaching but on a reduced load basis to work for their Master's degrees while employed?

RISCO: I don't know what to tell you because this hasn't been worked out.

SPRINGER: I hate to be a president now and intervene, but the NSF, bless it's soul, I think is moving in the direction of support for people who are less than full-time students which is a breakthrough as far as I am aware. Within institutions there is a common problem concerning faculty who are without doctoral degrees or advanced degrees and who wish to get them. These people are going to apply to NSF for a fellowship. The home institution will live with it that long at the same time allowing the fellow to continue teaching where he now is. That would test among other things our willingness to depart from ancient dogma which is that thou shalt not give a degree to a man who is teaching in your institution above the level of lecturer.

CROWE: The only thing in the consortium that is different is that it might help us share these people with each other for this purpose. We could identify them, find out who they are and find out what we've got to do. As of now we don't know. We don't know what to do. So the consortium might have that as one of its responsibilities. What we have to do so far is to find the man who's qualified to teach, but doesn't have the credentials, then we have to find the professor who has the credentials who can sponsor the course and then we use the man as a kind of walking computer, a resource person who gets paid, who does work in the course, but who is not ultimately responsible for it.

BRAGONIER: I would like to ask Dr. Howard Kramer what the problem is for the creative ending. For example, if Bob Bruce at the University of Wyoming had someone teaching part-time for him and we had courses down at our institution that would enable this individual to complete his degree program would he be eligible for the part-time graduate traineeship program that you talked about recently in Washington?

KRAMER, National Science Foundation: In order to be eligible the student would need to be certified by the institution in which he is enrolled.

BRAGONIER: Well, he could be taking his degree work at CSU forty-five or sixty miles away and working part-time at the University of Wyoming for his livlihood. This way he would get more income than he would otherwise and be able to complete his degree program.

KRAMER: It seems that he would probably be eligible.

UNIDENTIFIED: Should a fellow be enrolled at the same institution where he is teaching? Part-time traineeships were awarded in terms of teachers who would be inticed back to do more work. It would certainly fall into that category.

SPRINGER: It would certainly probably be worth doing with our own people on campus although I will point out that it may be quite comparable to the demands on our own faculty working toward a higher degree in a field other than his own. That's one of the problems that you run into; otherwise it may not be that acute.

CROWE: We should not be just discussing another type of graduate fellowship program. It is unrealistic to expect someone who has a Master's degree, maybe teaching in a public school system who wants to go back and get a Ph.D. degree, and maybe he's competent to teach in ethnic studies program, more than competent in order to get the credentials. You're not going to get this man for $200 a month. He just can't do it. He can't survive.

UNIDENTIFIED: We're not talking about the same thing. The institution can pay him, the place where he's worked can pay him $4000 a year if it wants to and has the money, and he can still be on an NSF fellowship in the institution where he's getting his degree.

UNIDENTIFIED: My notion is that he should get his degree while he's still alive. It won't do him very much good after that. It takes eleven years now on the average to complete doctoral requirements in some fields.

RISCO: I think the question that has come up sometimes is in institutions that have a graduate program and an undergraduate program whether somebody can be working on the graduate degree and at the same time be fully employed as a faculty person in the undergraduate level and not just as a graduate assistant. And I think that's the kind of thing you were pointing at.

CROWE: Well, our faculty council committee on minority education filed a report which was discussed by the faculty council a couple of weeks ago in which this committee recommended that minority faculty employed by the University of Colorado be allowed to earn an advanced degree there in contradiction to the ancient practice, in fact our standing rules. And I said in response to this proposal "Over my dead body." And the faculty committee members smiled at me and said, "Well, if that's the way you want it."

BRAGONIER: Faculty graduate students who are completing doctorates is relatively commonplace in U.S. institutions. A number of fellowships are being used for just the purpose that you've described. I would add, too, that both the Ford Foundation and the Danforth Foundation have special fellowships, and stipends which are out of the range of ordinary graduate fellowships which permit people to complete doctorates in the U.S. ethnic studies fields or in fields in which this is represented strongly.

RISCO: Let me raise the question here that was raised at a graduate council meeting in Fresno. We have a proposal that we don't know whether the Chancellor's office will approve or not. We don't even know whether the school will approve or not for a Master of Arts degree in which the committee--the three man committee which most graduate students have--will be composed of two people from the school and some person from the community. And immediately some people raised the question, do you really want to open up the school to the community that bad? Asked the question of having somebody from outside the institution being a member of a graduate committee for a student working on his thesis and having that person be one of the people that will sound off whether that project or that thesis is approved. And that is part of the kind of thing that we're talking about in terms of beginning to open up the institution to the community. Because the thesis might involve a project in the community, and the director of that project in the community or the head of a community organization in that community might be that person selected to participate in that three man committee. I wonder what the reaction of this thing as a whole is.

BRAGONIER: We do this routinely. No problems.

QUESTION: Let me ask a question of those institutions where this practice is prevalent. Can a man like this veto the vote? If he's alone it will still go over, right?

BRAGONIER: He has a vote, but the majority rules.

MCMURRIN: My job is at the University of Utah. A member of the community may serve on the committee as a voting member and not an extra member. The committees are nominated by the department and approved by the graduate dean. In the case of a non-faculty member they are nominated by the department and approved by the graduate council. They become a regular member of the committee with a vote and not an extra member of the committee if approved by the graduate council.

QUESTION: By extra committee means extra beyond the normal number?

MCMURRIN: Our Ph.D. committees consist of five, our Master's three including the non-member. With special projects in certain fields we would have say four faculty members and one non-faculty member serving on the committee and sign the thesis. They each have one vote.

SPRINGER: Our thanks are extended to members of the panel and respondents for their energetic work and remind ourselves that five minutes from now we have a no host social hour at the Olympic Bowl and also remind you that we did postpone the beginning of the annual dinner from six o'clock to six forty-five. Thank you very much.

Tuesday, March 3, 1970

THIRD GENERAL SESSION

Theme: "Changing Content and Approaches"

Presiding: Otis H. Shao, University of the Pacific

INTRODUCTORY REMARKS

Otis H. Shao
Dean, Graduate School
University of the Pacific

I feel that perhaps we should start by limiting the time each panelist should have for his paper, for we have about an hour and fifteen minutes for four papers as well as for discussions and questions from the floor.

Yesterday we heard several presentations which gave us a very good start on the theme of this conference. We know that interdisciplinary, problem-oriented degree programs are being introduced in many graduate schools. New doctoral degree programs have been accepted and adopted in some universities with an emphasis on teaching without sacrificing the importance of research. Yesterday afternoon a panel of students and graduate deans gave us some sort of an emotional experience that attends the introduction of something radically new into graduate education, namely, ethnic studies programs. It seems to me that the emotional overtone of their presentations is extremely appropriate because the introduction of ethnic studies programs into graduate education is not only an academic matter but also a situation that demands an attitudinal change on the part of the administration, the faculty, and the students. We also talked about the necessity of continuing education beyond the Ph.D. It seems to me that this kind of development emphasizes the spirit of graduate education which means continuing self-education and renewal. All of these changes, to a political scientist, demand or necessitate structural changes within our university system. And that is something that is extremely difficult to pull off. In fact, in my own university I've been trying to effect a radical structural change. I am still here, but next year I may ask you for a job!

This morning we will continue to address ourselves to the question of changing contents and approaches in graduate education.

Phil Rice has assembled a tremendous panel, varied in experiences, qualifications, and interests, to deal with different aspects of this topic. All of you know Dean Lester who is now on loan to the federal government administering a program that has more woes than promises. I am sure that he is very happy today to be among his fellow deans. It seems to me very fitting that the panel begin with Dean Lester. He will give us a short presentation on new content in graduate education.

THE FUTURE CONTENT OF GRADUATE EDUCATION

Charles T. Lester
Chief, Graduate Academic Programs Branch
U.S. Office of Education

It is a pleasure to be present at this meeting of the Western Association of Graduate Schools and to have the privilege of participating in your program.

I need not introduce my remarks with a long and plaintive list of troubles that beset graduate education. You have all been made abundantly aware of most of the problems that disturb us as graduate deans. I will content myself with pointing out that only five years ago the outlook for the expansion of graduate programs in all disciplines, save religion, was most favorable.

The establishment of an additional 25-50 strong graduate centers geographically distributed across the nation was viewed as a necessity. Continuous and expanding support of research and fellowship programs by the state and federal governments and the private foundations was a foregone conclusion. The race to produce enough well qualified college teachers to meet the demands of expanded higher education was thought to be a dangerously close contest between success and failure. Graduate enrollments were expanding at a rate, well nigh exponential, and there was thought to be an ample, in fact inexhaustible, supply of pie in the sky for everyone.

The reduction in funding of Federal programs in 1969-1970 gives us cause and opportunity to reflect and try to second guess. This is a strong temptation, but I shall resist it. In the first place, none of you would care to indulge me, and in the second place any such procedure is in danger of degenerating into a simplistic cause and effect exercise. While there are lessons for us to learn from the past five years, I will assume that this is not the time for holding a seminar on our version of Portnoy's Complaint.

Instead, we are asked to turn our eyes forward and speculate on what the future content of graduate education will be like. My present position in the Office of Education, my conversation and correspondence with many graduate deans gives me some opportunity to get a quasi-national perspective. It will be impossible before this august body of experts to mention any new development that isn't already known to most of you but possibly you have not tried, as I have tried to put down a number of interrelated, anticipated intrusions into already existing graduate programs. I shall mention new content elements that I believe will become generally characteristic of graduate study in the immediate future.

First, a tremendous increase in graduate programs in environment, consersation, urban planning and ecology. This trend is so obvious that you may wonder why I mention it. It obviously has the interest and support of private organizations and foundations as well as the support of local, state and federal agencies. Almost 60% of President Nixon's State of the Nation message to Congress was concerned with the problems of environment. We have discovered that we in Title IV have approved approximately 150 graduate programs related to environment, many of them multi or interdisciplinary, for each of the last three years. The mounting concern in every segment of our society for improvement of our environment by attacking the problems of pollution and urban distress suggests that support for environmental studies will flourish and such studies will multiply.

But let us be careful not to expect this development to be added on top of other programs. The President has taken a strong positive stand on three interrelated issues: control of inflation, drastic revision of federal relief programs, and revenue sharing with the several states. All of this adds up to suggest that we may have to substitute environmental programs for other kinds of activities in our society. Certainly, it suggests that massive, additional funds for environmental programs will not be added to other support programs now in existence. Put another way, I do not see how the federal government can be expected to expand all of its present support programs and add massive support for environmental programs on top. It seems to me that we are faced as a nation with a reordering of our priorities if we are serious about improving the quality of our environment. Any notion on the part of graduate deans that we can pursue "business as usual" with a nice fat federal frosting on the cake for environmental studies seems to me to be naive and unrealistic. How we can reorder our priorities is a subject of considerable weight within its own right and I leave that knotty problem to each individual institution.

Second, it also seems clear to me that there will be fewer graduate students supported on research grants from certain agencies in the immediate future. This will be due not only to decreased Congressional appropriation, but to Congressional requirements of the granting agency. For instance, the Mansfield amendment requires that the department of defense only support research that is directly related to the department's mission. This, given the sociology of our campuses, will surely decrease the number of such research grants on our campuses.

Third, it seems to me we will see further individualization of graduate programs. Given the decrease in support for traditional full-time graduate study, we will certainly see a proliferation of work-study, internship type of graduate programs. If for no other reason, we will find it hard to provide support for a high percentage of full-time study. We will all be forced to accept an increasing number of part-time students. The close relation between job and study will further erode the rigidity of language requirements, nature of the dissertation, quantity of required formal course work. In short, our graduate programs will become more and more controlled by the professional ambition of our students. It will be more and more difficult to retain any central control of a minimum of requirements for even the Ph.D. degree. Dr. Arlt spoke of the disarray of graduate requirements at the end of the sixties. It seems to me that during the seventies, disarray may well give way to dissolution. It will take a wise, astute, nimble witted, courageous dean to keep control of admissions, degree requirements, and certification of eligibility for an advanced degree.

Fourthly, students will have more and more to say about the content of graduate education. This is of course related to the third point just alluded to. Points three and four are so interrelated, it is difficult to decide which is more a cause and more an effect. Certainly, students will welcome an opportunity to engage in environmental problems, will welcome intership, will welcome work study and they will be ecstatic at more individualized graduate programs. Certainly, student participation in planning and policy at the graduate level will press toward the very things students are eager to have come to pass.

Fifth, there will surely be an increase in formal organized seminars for teaching assistants and prospective two and four year college teachers. All of us will have to exert our influence and use some of our resources to develop institutionally supported programs for the preparation of college teachers. It is clear that our colleagues in two and four year colleges are unhappy with the attitudes, expectations and life styles that our fresh Ph.D. graduates bring to their campuses. The publications of national organizations of both groups make this abundantly clear. We will respond to this criticism in a variety of ways. Some institutions are planning or have already instituted special degree programs for college teachers. However, I believe the Ph.D. degree will again prove its unique capacity to survive by requiring more formal attention to TA's and prospective college teachers. Other degrees may become accepted, even considered more desirable for two year college teachers, but I believe the Ph.D. will simply be modified in a way that will be acceptable to four year colleges. Furthermore, within our own universities, there is a mounting plea from the TA and the undergraduate that something be done to help the TA prepare for his teaching assignment. I believe this pressure will produce results both at the departmental and at the institutional level. Certainly Congress and the Office of Education in both NDEA Title IV and EPDA Title V Part E Fellowships are interested in the quality of the teaching experience provided the fellows by the participating institutions.

Sixth, there will be more interdisciplinary seminars and formal courses in future graduate programs. This, like all the other changes that I am so glibly predicting, is interrelated with the other items I have mentioned.

If institutions are to train persons with broad perspectives of environmental problems, some kinds of integrating seminars and courses will be needed. Students are now clamoring for these kinds of courses and many young faculty members are professing an interest in teaching in such seminars and courses. Although much of the interest in such courses is generated by naive and even reprehensible motives, the fact remains that such programs of study will proliferate. Whether they can stand the harsh climate of academic respectability remains to be seen. Whether prestige and rewards will come to those, both student and faculty, who participate, is still to be determined. Nevertheless, I predict many such formal courses and seminars will be launched.

Seventh, the dissertation for the Ph.D. degree will become more varied in form, content, length and purpose. In fact, in some instances, it may disappear even for the Ph.D. degree. Certainly, reports of work projects may become dissertations. Work done off-campus under relatively informal circumstances may well be the stuff of which many dissertations will be made.

In summary, the President's Budget message and five year projections suggest that we deans of graduate schools face a choice of flexibility of programs or loss of students. Even the Ph.D. Degree will have to do more adjusting, faculties will have to be more open to experimentation, deans will have to reorder graduate school priorities, structures and functions. The changes that seem to be ahead give us the challenges of austerity rather than the challenges of affluence. Do we cut back or do we adapt? Do we risk the total loss of the last vestiges of obeisance to the liberal humane tradition of our educational forebears? Will the graduate school that adapts lose its commitment to the value of learning and knowledge for its own sake? Will the graduate school that fights to retain its past standards and priorities be forced to curtail its graduate programs? Despite all that may seem undesirable in what I have predicted, optimism can still prevail. Our society will continue to need well trained specialists in all branches of knowledge. It may be that Allan Cartter and others are correct in assuming that we are in danger of producing too many Ph.D.'s from too many graduate schools. However, if the Ph.D. becomes even more heterogeneous in character, as seems likely, we may adjust by producing Ph.D.'s whose expectations will allow them to fit smoothly into a greater variety of occupations. Some are horrified by this concept affirming that it will destroy the integrity of the Ph.D. I guess my first cynical response to this is, "What integrity?"

RESEARCH AND RADICALISM

Paul Sultan
Visiting Professor of Labor Economics
Simon Fraser University

The academic industry is in a stage of seige. University administrators are caught in the cross-fire between students and the trustees, legislators and militants, alumni and nihilists, pacifists and hard-hats. The industry's market place is no longer characterized by the vigorous competition of ideas; but rather by encounters between physical force. This brief essay will not attempt an exhaustive probe of the causes for student radicalism. It will focus, rather on one major criticism of campus life: the bankruptcy of the academic response for change attributed to the contemporary "fenzy for faculty research." We begin with a capsule summary of the academic view of the major social problems threatening domestic tranquility but neglected by the academic industry because of its preoccupations with research. We shall briefly document the case against both administration and faculty to these challenges and offer a caricature of inept administrative and insensitive faculty responses. Our final and major section will propose a 'new look' for research within our industry. Our central thesis is simply this: If academic research has been a major cause of student revolt, it can also serve as its major solution.[1]

(a) Basic Domestic Problems:

It is probably extravagant to draw yet another portrait, however brief and incomplete, of the major social problems confronting our society. The following capsule is offered, however, to identify the sources of disenchantment with the academic industry, the inappropriateness of much of the current direction of research, and the ripe opportunities we now have to salvage something from this situation.

Let us quickly trace the major dimensions of these major domestic problems. First, we face the urban crisis and the charge that we have done little to anticipate or reverse the decay of our major metropolitan areas. That crisis is reinforced by the race issue, for the major victims of the urban problem are racial minorities, particularly the blacks. While the influx of blacks to the central city has somewhat dampened, the exodus of whites to the suburbs has accelerated. More distressing than the apartheit nature of racial segregation is the economic decline of the inner city. The economic base for our major metropolitan areas is decaying, and the stagnation of production and employment in the central city compounds the unemployment plight of minorities. More often than not, urban renewal plans involve guilding the ghetto, or the construction of buildings to administer government projects that have imperceptible influence in diminishing poverty, let alone creating fresh employment opportuntiies for minorities. The decline of that economic base has set in motion a municipal tax crisis, involving a further erosion of educational programs to serve the poor. The economic consequence of this has been growing disparities of educational achievement (rather than the formal count of years of schooling) for blacks and whites. In spite of minority militancy, enrollments of minorities have increased only modestly. The incidence of unemployment, while always disproportionate high for both blacks and browns compared to national averages, has grown increasingly uneven, with the loss of human resource underestimated by the formal count of those visibly unemployed. Much more substantial losses of human resource are represented by hidden unemployment (or the forced withdrawal of blacks from labor force participation) and disguised unemployment (represented by the occupational misallocation of minorities to low skill and low paying jobs). The minorities, witnessing the widening gap between their aspirations and realizations, have reacted with a rage convulsing our campuses.

---

[1] In other words, while what follows emphasizes the ineptness of the academic response to challenge, we do not subscribe to Midge Decter's fatalism: "When you are caught between left and right, the only way to go is down." We do not see the academic industry as part of the strewn wreckage of the twentieth century, collapsing because of the arrogance and elitist revolutionary minorities from within, or the intensified of repression from without.

Compounding the sense of frustrations is the realization that federal programs designed to ease these difficulties appear ineffectual. Our sensitivity to these failures has been sharpened, of course, by the extravagances of both military and outer space adventures. It is now acknowledged that welfare programs may be encouraging the disintegration of family units. And many government programs may have indavertant or unanticipated consequences in aggravating poverty. For example, subsidies for research in farm mechanization have accelerated the displacement of farm labor, squeezing the displaced into urban centers where their existing skills are seldom marketable. Michael Harrington has cited some of the major national policies--including such programs as tax breaks and farm price supports--that provide enormous benefits for the wealthy, while diminishing even more those revenues that might offset the problems of the poor. Indeed, he charges that we are guilty of the "obscenity of spending more money to promote poverty than to abolish it."

And the unprecedented attention given to research and development in the last two decades, generously funded with federal resources, has accelerated the pace of penetration of new engineering forms, telescoping the time gap between discovery and application. The new

---

Michael Harrington, "The University and the Problem of Poverty," in Stress and Campus Response, G. Kerry Smith, ed., San Francisco: Jossey-Bass Inc., 1968, pp. 43-51.

industrial revolution has created factor inputs with astonishing abilities to simulate--and improve upon-- the sensory and discretionary capacities of labor, greatly widening the range of human talents now threatened with the superior performance capacities of new technology. One suspects that the upgrading of machine capability has surpassed the upgrading process for human skills. The displacement strains on the labor market adjustment mechanisms are obvious in the growth of persistent pockets of unemployed.

Compounding our concern of accelerated obsolescence of skills and our imperfect information networks that would identify new skill requirements, is the belated appreciation that accelerated technology produces negative externalities. The anti-amenities of urbanized society is seen in the reality that clean air, water and terrain are no longer free goods. Once again, the campus gains center stage in the rising tide of protest. Even sophisticated scholars are now emphasizing that our inability to anticipate the indirect and subtle penalties of new technologies reflect the academic division of labor and compartmentalized systems of analysis. Our tunnel vision is reinforced by specialized methodologies that too frequently focus on the direct and measurable consequence of a change agent, not on the subtle, illusive and second, third or fourth stage consequence of that change. The qualitative implications of quantitative change can no longer be ignored simply because the academic industry is not tooled up to deal with such change.

The direction of criticism to the academic community is not altogether unwarranted. The ferment on the campus cannot be attributed to the tolerant or lax indulgence of extreme forms of protest. Nor is this a situation where the campus, because it has identified some elements of these problems, is illogically blamed for creating those problems. Society is not engaged in the old ritual of shooting the messenger because he bears unhappy news. Rather, society is quite properly indicating the academic industry for the defieiencies found in the larger community.[2]

These are, of course, familiar contentions, and the disquieting anxieties of society about its capacity to alter its drift quite properly brings into sharp focus the misallocations of intellectual resources. Greater specificity in the charges made against the response of the academic industry draws our attention inevitably to the role of research. What truth is there in the charge that our universities represent the service station for the establishment, that they do, in fact, reflect a microcosm of the imperfections of the larger society?

---

[2] The view is growing that the academic industry spawns forth the 'new class,' an appropriate target for the disenfranchised. Describing the new era, Clark Kerr explains: "Technology has moved beyond the harnessing of the wind and steam and, in the course of doing so has thrown up a new intellectual class. The campus has taken the place of the manor or farm and the factory as the prime locus of social conflict. The new confrontation is with centralized industrialism under whatever auspices, with large-scale bureaucracy and its IBM card, with the dominance of the technocratic over the more humane, with the visions of Orwell and of Marcuse." In "Industrial Relation and University Relations," Industrial Relations Research Association Proceedings, 1969, p. 17.

(b) Academic Research: The Limits of the Academic Response:

In the previous two decades, research and development have been a rapidly growing component of both private and public sector activity, and its role as the cutting edge of change is much in evidence in education. Economists emphasize that improvements in the quality of both labor and capital are a major source of economic growth, that such quality is much enhanced through research and development. In contrast to the constructive role given to research in the private sector, academic research is frequently identified as an extravagant diversion of intellectual resources, undermining the integrity of our operation.

First, the charge is made that such research diverts intellectual energies away from teaching to the laboratory, away from student contact to the isolation of the research laboratory, away from articulation to contemplation, away from involvement to detachment, away from commitment to neutrality, away from subjectivity to objectivity. The preoccupation of academic stars with research typically involves staff reductions; these in turn compel larger and larger classes, with the impersonalization of the learning experiences this involves. W. T. Lippincott of Ohio State University has testified that government support of university research is "potentially the most powerful destructive force the higher education system in America has ever faced." Clark Kerr acknowledges the cruel paradox that ". . . a superior faculty results in an inferior concern for undergraduate teaching" simply because research activity draws faculty attention away from instruction. The disenchantment of the typical student is described in the Muscatine Report. He expects the idealism and wisdom of the faculty to sharpen his perceptions of the wrongs of society. But he soon uncovers a much different reality:

> *Few if any of his teachers even know his (the student's) name. He comes to believe that his worth is measured in answers to mass examinations, not in personal assessment of his work and ideas. He learns to play a game within the University to select his courses according to the grade he is likely to receive, to write ritual papers and to second-guess the instructor. He decides the University is too busy conforming to the needs of the establishment to produce men capable of opposing its evils.*

From the student viewpoint, then, research is not an honest search for new truths, but a tired old game to secure funds. The successful research scholars jealously guards his time from intrusions from the students and the reward of distinguished scholarship is a reduced teaching load. In John Fischer's lucid attack, "Is There a Teacher on the Faculty?" Fischer notes that the best professors are seldom home. The student . . .

> *will be lucky if he ever sees any full professor of stature, because of the academic pecking order is largely determined by the number of consultantships, industrial advisory assignments, off campus conferences and travelling fellowships that a faculty member can pick up.*

The research faculty might well protest: Student expectations of informality, intimacy and sustained contacts with the faculty reflects the innocent view of students raised in affluence, pampered and overindulged. But there is more substance to the charge of isolation than this, for the student feels that the very substance of the learning experience is contaminated by our educational delivery systems, that the content of the lecture reflects the degree of faculty responsiveness to twisted national priorities. Again as the Muscatine report documents the student viewpoint:

> *To succeed in this society, you must mask your real feelings, and become an organization man, wear what you're expected to wear, say what you're expected to say, and praise the product of your company when you know it has been built to wear out. ~~It's~~ all a game, playing a role; and these young people find that Americans in this other-directed age have been conditioned to accept without a thought or a murmur their own falsity. They accuse Americans of sacrificing conscience to the quest for status. In this society, they say, those who claim to be moral are really immoral and those who claim to be sane are truly insane.*[3]

---

[3] This same point is made with equal eloquence by Carl Oglesby, former President of S.D.S. in his attack on the authoritarian structure of contemporary education:

Starting with the kindergarten system, where kids find out that teachers love those who make the straightest lines, the entire educational system is designed to instruct most effectively in the virtues of social obedience. Our national hypocrisy in this respect is unlimited. The same school system where you learn to praise certain flashes of dissent--"If this be treason, make the most of it!"--unabashedly submits everyone to the regimentation of canned knowledge and the imperious grading system which grades nothing but skill in conforming. The same corporations which pretend to admire tigerhood reward tabbiness. Everybody finds out very soon that the time for having the courage of your convictions is when you're certain that your convictions and the boss's coincide. The price is incalculable for it obstructs the further development of all aspects of our social and productive systems.

In "Break Down the System?" The General Electric Forum, Industry's Responsibilities in a Young Society, Vol. XII, No. 1, Spring, 1969, p. 14.

Such a posture is reinforced by an academic experience that requires student to ponder facts and theorems provided by unimaginative professors who are no longer in tune——or concerned—with the problems of contemporary society.

A further criticism relates to the economic implications of research. Until recently, the 17 percent annual growth of research and development activity created a major source of funding for university activities. Some fifteen percent of all support for institutions of higher learning is represented by such research funding. NSF director Haworth testified that such Federal funding involved support of approximately one third of all scientists and engineers in the country; it absorbed the intellectual energies of about seventy five percent of the scientists and engineers in our colleges. The speculation grows, that the diversion of such talent for space exploration and D.O.D. contracts has denied the private sector support of such talent, aggravating rather than ameleorating domestic problems.

Such research has in addition, greatly accelerated the concentration of talent, suggesting economies of scale for academic research. Much space and military research is undertaken on a team basis, with heavy doses of supporting capital. NSF director Haworth acknowledged how pockets of talent generate growth: "The more chickens you have, the more eggs you can get; and, therefore, the more new chickens you can hatch." Centers of scientific research attract both funds and capital, with the concentration of such talent attracting further funding, often draining necessary scientific talent from smaller institutions.

Furthermore the presence of research facilities creates a class system within the academic community, with the research 'stars' enjoying more substantial pay, more flexible schedules, more generous travel allowances, more secretarial support, more lavish offices, more opportunities to attend professional meetings, and of course more opportunity for quiet contemplation. These benefits provide a visible and obvious 'orbit of coercive comparison' for the teaching faculty:

Their own sense of irritation grows as they realize the second-class citizenship status they suffer because of their attention to students and teaching.

The diversion of academic talent to research activity compells reliance on a T.A. system, with junior apprentices to the profession--already distracted with dissertation responsibilities of their own--displaying their own brand of indifference and frustration with the burdens of instruction.

Furthermore the revenue flow provided by research is erratic, creating its own source of torment in program planning. The intensification of competition for research funding is reflected in the enormous investment of energy in grant applications, with grantsmanship setting in motion its own legions of professional staff cultivating Washington and foundation contacts, and the proliferation of proposals. Much energy is given over to speculation about government priorities.

Academic courtesans are courting increasingly fickle, cool or distant funding agencies. As Gustave Arlt has testified:

> *Federal funds are drying up faster than they bagan to flow. Foundations that provided supplementary support are fighting for their existence. State legislatures have made cuts in their appropriations to public universities and colleges and many have enacted restrictive legislation to withhold funds from both public and private institutions that do not maintain order on their campus. The educational associations based in Washington are locked in battle with the Congress over a whole spate of bills providing all sorts of punitive measures against students, faculties, and institutions as a whole, and right now we seem to be on the losing side.*

Graduate Education Today, processed, p. 2.

Finally the charge is made that graduate education sets the life style for faculty behaviour with an influence extending through undergraduate colleges to community colleges. Any promising college attempting to secure national attention for its academic excellence soon realizes that such fame is secured through the research reputations of its faculty. As the Vice President of Stony Brook explained: "Now we have it made, or largely made. We've proved we can play the game according to the rules laid down by Berkeley and Ann Arbor and Urbana." Graduate students carry back to their colleges the value acquired through their graduate experiences, with its strong attachment to research. Thus the deficiencies of graduate schools are transmitted to throughout the industry. As Professor Kramer J. Rohfleish explaines,

> *. . . even before they (the graduate school product) separate from their mother institutions, many of them have been advised to take their teaching lightly because the rewards in that channel are so slender. These apprentices will prefer to open atoms rather than minds. It is more profitable--and often less work. . . . Many more seek at the earliest opportunity to convert their new homes into replicas of the institutions which nourished them . . .*

These are just a few of the charges made against research. To recapitulate, it is alleged that research has diverted energies from teaching to non-teaching; it has recasts academic priorities with less concern for the pursuit of truth and more concern for vulgar pragmatism in playing the game of grantsmanships; research has drained much-needed talent from small liberal arts institutions, it has created a new class structure within the academic industry, aggravating the contempt for teaching; it has compelled reliance on a TA system, with the junior apprentices to the profession perpetrating through time and space the snob values of detached research. And so on.

To the sophisticated administrator and scholar, the above charges, while containing an element of truth, cannot detract from a more important reality: There is no substitute for subject-matter competence.

A competent teacher is one who knows not only the 'received' doctrine, but also one who is himself exploring the fringes of ignorance of his discipline. That is, he is doing research.

Our task here is not to establish the relative strengths of complementary and competitive relationships between research and teaching. Our question is simply this: Can we identify a redesign of research which might strengthen the learning process for both student and teacher? Before offering a proposal on this, let us return to the issue of the outside challenge to our academic enterprise, and identify some criticisms of responses.

(c) Administrative and Faculty Responses to Pressures for Change:

The adjectives describing institutional life are familiar enough. These institutions are centralized, bureaucratized, standardized, systematized, routinized and sterilized, leaving students demoralized.

And the descriptions of institutional response to those challenges are hardly encouraging. John W. Gardner, with remarkable understatement, comments:

> *I must report that even excellent institutions run by excellent human beings are inherently sluggish, not hungry for innovation, not quick to respond to human need, not eager to reshape themselves to meet the challenge of our time.*

Stress and Campus Response, p. 246-7.

The charge that present systems are not tooled up for contemporary realities abound. Joseph Axelrod charges that ". . . we are caught in a system designed for another world, and for another century." Roger Haynes has charged the academic response to this challenge as a ". . . mindless and inefficient stumbling from crisis to crisis." Lewis Mayhew attributes this to the unique combination of powerlessness and mindlessness, and poses the question: "Is the malaise inflicting higher education terminally malignant or benign?" Gustave Arlt cautions that "No one can doubt that there is grave danger that higher education may be radically altered--and not for the better--perhaps partially destroyed, if administrators, faculty, and students do not act together in wisdom, goodwill and harmony now." In John R. Searle's "Foolproof Scenario for Student Revolts" the conclusion is reached that administrative defeats invariably reflect the administration's technical mistakes, its failure to grasp the nature of the struggle they are engaged in and, most important, their own demoralization.

> *Like buffaloes being shot, they look on with interest while another of their number goes down without seriously thinking that they may be next.*

We have the updating of Acton's famous dictum with its contemporary version: "Powerlessness corrupts, and absolute powerlessness corrupts absolutely."

With the expansion of the Indo-China war, the conviction grows that colleges may never again return to a "business as usual" posture. The sense of crisis is deepening on all sides, with the concensus growing that there can be no collective innocence or indifference about the tragedy and cost of that war. But the view seems to be gaining support that if politicization is the result of a post-Nuremburg morality, so be it. The major tremors on campus have shaken the foundations for academic orthodoxy, with the after-shocks of that upheaval likely to extend into the indefinite future. The intensity of protest is matched by a broadening of protest, with the concerns of the traditionalist for neutrality now swamped by the sense of urgency. The era of turbulence, of sit ins, of teach ins, of smash ins, is not over: Community reactions to these actions promises to set in motion its own repressions, (giving in turn, further substance to student complaints and broadening the base and accelerating the thrust of campus protest.)

The sense of bewilderment in the face of such rapid pressures for change are not, of course, confined to the administrators of the academic enterprise. Perhaps more than administrators, the faculty itself reveals its vulnerability and impotence.

Many faculty members fear any form of political activism; they see all forms of protest as a threat for their own life-style. Rather than see it as a clamour for reality and relevance, they see it as a conspiracy to use them, to divert their energies and attention away from lecture notes yellow and crisp with age, to new topics and fresh problems.

To understand fully the nature of that concern, one must fully appreciate--as certainly you do--the sanctuary that has been the professor's escape from reality. Such isolation does not often generate a sympathetic or kindly view of external problems. Professors, particularly graduate professors, are often described as persons presiding over priesthoods, privileged sanctuaries with each professor operating like a lord controlling the destinies of his duchy in this academic Camelot. The faculty are seen as persons aristocratic in their outlook. Like the kings of yore, they are genuinely unable to understand why the property right of their jobs should be challenged, particularly by pimply sullen students or humorless bearded radicals who have never contributed so much to society as running a paper route.

The tenacity of faculty to cling to the status quo is reflected in departmental syndicalism, with little opportunity for new combinations of knowledge to surface. Auden has likened such tenacity to traditional form as somehow analogous to "lecturing in navigation while the ship is going down."

The further source of indifference on the part of faculty is the reality that the administration, rather than the faculty, are manning the barricades. Many faculty has maintained a posture of strict neutrality even though realizing that many of the perogatives being challenged involve the faculty. The discrete retreat from the firing line, and letting the administration absorb the full brunt of the pressure reflects what Commoner has called the "mandatory disinterest" of faculty, a mental set which rationalizes isolation, and vulgarizes reality.

The task facing administrators is, of course, enormously complicated, if not made impossible, by the mercurial and unpredictable response of the faculty, and its impulse to protest any decision made by administration, even non-decisions. Faculty are deeply entrenched in a traditional guild structure; they have enjoyed enormous discretion in awarding certificates of achievements, union cards that until recently have assured a lifetime stream of income to the chosen few.

It is obvious that there is much in contemporary course content that is out of tune with contemporary reality, but it is equally obvious that the faculty are among the last to appreciate the obsolescence of their skills. Many traditional programs in the social sciences emphasize traditional principles, supported by the weight of tradition and custom; many programs have deep historical tap roots discouraging any transplanting. Many programs display a built-in hostility and resistance to change, particularly programs that would involve new combinations of old fields. All of this reinforces the cult nurtured by students who quickly learn that the price for admission to the priesthood is respect for ritual and exclusivity. As a case in point, Jenks and Riesman note how a student's broad multi-disciplinary interests are not likely to survive graduate studies.

> *Broad interest . . . "must be postponed until he had met his departmental requirements and gotten his degree. By that time he is likely to have a vested interest in the value and relevance of what he already knows. He is likely to find that his career depends on making a favorable impression on other men with the same congeries of skills he has just acquired. So he digs deeper into what he already knows and lets the other matters slide indefinitely.*

Cristopher Jenks and David Riesman, The Academic Revolution, Doubleday, New York 1968 pp. 524-5.

(d) Where Do We Go From Here?

We have sketched a few dimensions of the external realities crying for attention by the outside community. We have noted faculty research can nourish student discontent. And we have noted the bewilderment and disarray of the administrative faculty response to the student challenge.

But what has all this to do with faculty research? It remains the central issue as to what academic life should be all about: In the more charitable portrait of the research faculty he is indulging in hypothesis construction in the splendid isolation of his laboratory. In the less charitable portrait, he is seen hustling for money in the corridors of government and foundation offices, pandering pleasures in the unembarrassed prostitution of his intellectual wares to support illicit and immoral national goals.

This is, of course, an inappropriate dichotomy, but one that reflects the stereotypes feeding campus discontent. What I am proposing is that we can do much to integrate research with teaching, by giving research a more explicit role in academic programs, and by giving such research a community-oriented focus to re-establish its relevance. This modest proposal assumes:

(1) There will be as heavy an investment in the explorations of domestic social problems in the remainder of the seventies, as was provided for space explorations of the sixties. The turnaround in public investment from space and military projects to domestic problems is politically expedient and economically inevitable.

(2) There is no basic conflict between student aspirations for action-oriented reform programs and the value structure of the academic community. There is no hard core sentiment 'for' war, 'for' poverty or 'for' racism. The controversy splitting the academic community is not basically a conflict over ends, but of means. The growing consensus on the need for reform provides the opportunity for securing a consensus on the appropriate means to those ends.

(3) While the cynicism is general that the priesthood is unlikely to reform itself there is no basic conflict inherent between induction and deduction, between reality and abstraction, between realism and purity. The soundness of analytic procedure is not threatened by the kind of problem analysed. While there may be a time frame of expediency that will detract from the highly abstract speculation and research with a long gestation period, the press of community problems does not pose any basic challenge to the integrity of faculty research. Our activities are cluttered, of course, by many empty intellectual boxes. But this does not imply that there are easy or obvious answers to difficult questions. We are simply suggesting that the laboratory for experimental design can provide a more appropriate balance between the rich resources of the library and the rich resources of the community; it will blend the elegance of abstraction with compassion for social need; it will fuse sentiment with rationality.

The new look for the program I am proposing might well involve a reduction in the total number of students admitted into graduate programs, or at least a decline in the student-faculty ratio. This might reduce the threat of oversupply of Ph.D.'s while creating fresh opportunities for genuine student-faculty collaboration. We suggest, too, some leapfrogging be allowed for those in the applicant queu to make certain that the program involves minority students, persons with a heavy idealism and maturity, persons appearing as risk takers rather than risk averters. We assume that the products of graduate programs will less regularly flow into well-defined teaching professions. Increasingly, they will be absorbed in a wide range of instructional and research functions; many will be change agents in the community's public and private organizational structure.

This admission focus would reduce our dependence on traditional entry level tests, with their strong cultural bias. There would be less attention to the undergraduate transcript.

It probably would not be prudent for most programs to spin off a separate research center with its 'research only' focus, differentiating students in terms of teaching and research expertise. This is suggested only because of the deep prejudices now held in the academic community regarding the froth typically associated with 'teaching only' programs. We propose to integrate the research function more clearly by providing that the first year--or year and a half--of graduate work be given over to the disciplined study of research methodologies and principles. In economics, for example, this would involve mathematics, statistics, micro and macro theory and econometrics, with the latter giving heavy attention to experimental design. Qualifying examinations could then follow, with the remainder of the student studies given over to researh. With research very broadly defined. It need not culminate in a dissertation.

In the research phase of graduate work, students could take additional seminar work in a major subject-matter area within the program, or take additional course work in related programs. A two year research program would be designed at the outset, with most of those programs involving heavy collaboration with the faculty.

Faculty would be expected to attend one student-faculty seminar a week, a session given over to recent research experiences and problems. Teacher and student would join each other in a mature journeyman-apprentice relationship, with the mutuality of respect cultivated by day-to-day collaboration in truly joint research endeavors.

The research activities need not involve a team effort, but a team activity would be encouraged. The major strategy is to establish on-going linkages between the intellectual curiosities and abilities of both student and faculty and contemporary social and economic problems. In terms of the content of problem-analysis, attention would be given to applied, as opposed to pure research. Emphasis would be given to projects with a relatively short time span in terms of payoff. Projects would be favored that are labor intensive rather than capital intensive to maximize flexibility and smoothness in the transfer of resources with the completion of a project. And of course such emphasis would minimize capital costs while providing vital funds for student support.

It is expected that such research centers would not have any reluctance in exploiting the star system. Major scholars with works that touch on the research issues of concern to students, faculty would be invited to visit the center, with the promise of attractive facilties to pursue their own work in the field. They may be invited to offer a lecture series to illuminate their own perspectives on problem solving. They might be invited to share, formally or informally as a member of the research team, with such collaboration confined to day-to-day assistance, rather than through formal seminar presentations.

It would be important, of course, that external funding for such activity be drawn from a range of sources so that faculties and resources are not locked in to single government agencies or foundations. With a diversity of support, there may be greater assurance of stability in the flow of revenues for such research.

But even more important, the selection of issues for analysis must not depend exclusively, or even substantially, on funding prospects. The priorities or needs for research should be identified by the student-faculty teams, with those priorities free of the twist or distortions that funding prospects might otherwise induce. Research projects would be problem centered rather than discipline oriented or compartmentalized by departments. Stress would be given to interdisciplinary and multidisciplinary activities, with designated research teams of varying inputs to explore the many facets of a single problem.

There would be no formal examination, as such, for the two-year research venture that would follow completion of the methodology analysis. Students would be expected to report regularly in the weekly seminar of their progress. The research center would be encouraged to arrange for publication of its research efforts, either through existing publication sources or through its own publication agency. Such publication gives further assurance of the integrity of the inputs to the research activity, and encourages the prospect, of course, that applications may be made for productive research results.

Such research activity would be field rather than discipline or departmental in its orientation. By that I mean, it would emphasize 'outreach' programs. It would not require marble palaces for its operation, but would make use of store-front operations or any other expedient that would allow intellectual resources to interface with reality. The agricultural extension program of the government might serve as a model. The graduate school would no longer be seen as the citadel that renders special privilege to the favored few, but an institution with extended fingers of influence and activity that penetrate to the very core of the inner city, that touch the very nerve ends of the major social and economic problems of our time.

In this new program, there will be a deliberate effort to build person-centered academic activities that emphasize experimental and existential touchstones. It will build on the contemporary morality that is conscience centered rather than rule centered. It will emphasize the existentialist approach to education, rather than the traditional essentialists approach. The essentialists emphasized objectivity, quantification and the ordered sequence of exposition of established truth. The existentialists, by contrast, emphasize involvement and instruction, on the cognitive side of learning, of focusing on not just what the teacher might say but on what the student might hear. In essence, it is an approach that emphasizes the multiple responses of "feeling" reality.

This new approach recognizes the truth expressed by Barry Commoner, "Life, as we live it, is rarely encompassed by a single academic discipline." (op. cit. p. 23). We respect the need to abandon the atomistic methodologies that have divided the social sciences, and abandon the purist notion that we fulfill our function when we seek truth for its own sake. For the greater obligation is that we seek truth for society's sake.

Certainly my associates would wince at any notion that we compromise the integrity of our traditional academic fare with such attention to sentimentality, emotion and reality, for in their view, there is nothing more pathetic than the social scientist viewing the complexities of present life with no analytic tools other than his good will and bare hands. On the other side, the charge might well be made that frequently the design of analytic models pre-determines just what outcomes they provide. The systems or methodologies are not, in this context, neutral. Not only is the nature of data collected to verify hypothesis screened for its 'relevance' to the problem, but the very design of the net will determine just what fish will be caught. Thus, the detachment and objectivity attributed to traditional analysis is a self-serving pretense. But to push the analysis to its opposite extreme might expose researchers to the epithet of the Berkeley Barb: as being persons "hooked on thinking." The extremes of both existentialist and essentialist schools are vulnerable to criticism. What is proposed here is that these techniques be combined, with growing faculty awareness that elegance of analysis must be linked to the relevance of analysis.

THE CHALLENGE OF CHANGE IN GRADUATE EDUCATION TODAY

Richard A. Nevé
Dean, Graduate Studies
Central Washington State College

Nothing is easier to take for granted in the United States than long-term economic growth, and a good many people take it for granted. Nothing is easier to take for granted in higher education than a new graduate program and a good many graduate deans take it for granted that their institution is the one to launch that new graduate program. The implication is that there is a definite place in the world for the potential new graduate. Proliferation of new programs has occurred mainly along with the introduction of new fields of subject matter. More recently, emphasis has been given to the Doctor of Arts and similar type degrees in response to the need to provide teachers rather than researchers. To an institution such as mine, creation of these latter degrees has raised serious questions relating to the impact of these degrees on the marketability of my graduate students.

My point, however, is to suggest that no matter how many more degrees or titles we create or change, it appears that we are saying to any and all students who will hear us--we have a degree for you, come and get it--we have a lot of degrees to offer--hurry in, take one. We don't say that the degree, while it may look alive, is really not viable in today's market place. Have we as Graduate Deans seen that a given demand has diminished, that an area is not needed? Have we the foresight and courage to say to students and faculties alike, we don't need so many physicists or historians or whatever. When Sputnik communicated to us that the Russians were far beyond us in space technology, we responded vigorously. Degree programs proliferated almost overnight across the nation. The crank was put on the mill and the grinding process was begun. Now the wheel is hard to stop--there are too many physicists--biologists--whatever--. My question is, do we honestly know the condition of all of the disciplines, foreign languages, chemistry, you name it. The front page article in the Chronicle of Higher Education, January 12, 1970, illustrates the problem in more detail. For example, at the American Historical Association's meeting in Washington, 200 employers were recruiting from a pool of 2000 prospective employees. Forty per cent of the 1969 Ph.D.'s in Physics were still looking for jobs last fall, and so the list goes on and on through each department.

What I feel is needed is the provision of more precise information to potential graduate students in order that they can make a more realistic choice for their future. Certainly, it is true that personal satisfaction should not be cast aside lightly for the student who wants to go into any specific discipline. But, I also think we are safe in assuming that many graduate students choose a profession not out of particular attachment, but because the economic prospect looks good. I am not suggesting either that we go out of business or halt our efforts. Rather, we should interpret the signs as a warning signal, an opportunity, to look in new directions.

Keep in mind that a new balance is resulting from the economy's lopsided growth. Nearly all the increase in employment between now and 1980 will be accounted for by services (education, medical care, government, trade, finance, and business services). By 1980 services will employ roughly twice as many people as all the rest of the economy (that is, farming, manufacturing, and construction). Now that improving the quality of life has become national policy, productive growth is all the more necessary. Controlling pollution, reviving mass transit, rebuilding cities, reducing crime, providing ample medical care, and education, will put stupendous additional demands on the nation's resources.

In this conservation minded decade to come we should think of our human resources and how best they will satisfy their own personal needs than those of society. Our human resources are as important as any other and need not be looked at as only a biological time bomb threat.

The potential graduate student today might be swayed by the "opportunities" in newer fields. We should be swayed to say "whoa." Let's take a look at 1) the ecological needs of the world, nation, and state; 2) the need for people trained in one or more aspects of social work; and 3) the need for awareness of cultures of the past and present (thus, the tremendous demand for anthropologists now). These needs are very real, but I ask us to consider--should every college and university across the land develop graduate programs in ecology, social welfare, and anthropology, in a manner similar to the Sputnik response?

I say "no". We will create a surplus of graduates here (just as in physics, etc.) if we don't establish an evaluative system for equating the relationship between supply and demand. In the business world this is referred to as Market Analysis. We may not like to make business-education analyses, nonetheless, the finished graduate in many areas today is factually a non-marketable product, an over-supplied item, an unwanted article. The high cost of education at all levels relates education very much to the business world and we can like it or lump it.

What are we going to do now about the existing non-marketable highly trained people in the over-supplied fields? I don't have an answer as yet. For the future, what are we going to do about the students coming along? Toward which field of specialization should we encourage them? None of us could be accused of misleading anyone into any graduate programs. Yet, we have been deceived into believing we were supplying the demand. Furthermore, we are deceiving students if we do not know the basic facts of supply and demand. I plead guilty to the deception to some degree by virtue of ignorance. I, and some of you (perhaps all of us), cannot long plead ignorance.

The Graduate Deans of the five public institutions in the State of Washington have been working together for the past several years to provide information such as: new programs coming up--the number of graduates turned out per year per discipline and per degree and other bits and pieces of information that we feel show how active we have been.

What we lack (and I suspect and regret that all institutions do) are facts and figures on: 1) the number of candidates expected on the line each year in each discipline, 2) the number of faculty positions open each year in each of our institutions for the succeeding year and 3) some realistic projections for subsequent years for students coming along and possible open positions in education, government, and industry.

What we need to know are facts and figures relating supply with the demand from our state, region, and nation. The nation as a whole (specifically each graduate dean) needs to know this very same information.

What I am proposing is that WAGS recommend to COGS that a national clearing house be established for the following relatively simple and easily obtained facts: 1) the number of graduate students in each discipline expected to graduate each year with projections for the next 3-5 years; 2) the number of faculty positions open in each of our institutions for the coming year with projections for the next 3-5 years. (The Academic Vice President should have these figures.) If Mina Reese's statistics are correct, academics would account for sixty per cent of the demand and we could calculate by interpolation the demand from government and industry; and 3) Transmittal of the above information to each graduate dean in the country is of course the reciprocal arrangement which balances the scales with supply matching demand far more realistically than ever in the past.

Parenthetically, the state of Washington is now asking its institutions of higher learning to submit budget forecasts for the next 5-10 years utilizing this kind of data. Many of your own Governors are requesting similar information.

This information is needed not only as part of the basis for capital and operational budget requests--it will also assist in more realistically making the hard but necessary decisions as to who, and how many institutions are going to develop programs in e.g. ecology, social welfare, and anthropology. As a nation, we can't afford excess programs in terms of dollars. As graduate deans, we can't afford to misguide students thereby misusing our most important resource.

PROJECTED PLANS FOR CHANGES IN THE GRADUATE RECORD EXAMINATIONS

Richard Burns
Program Director
Graduate Record Examinations Program
Educational Testing Service
Princeton, New Jersey

Introduction

Before I get into the heart of this discussion, I feel I should reassure those members of the GRE Board who are at this meeting that the title of these remarks is "Projected Plans for Changes in the Graduate Record Examinations Board." There is no dire message in this paper for any member of the Board.

As this Conference has so eloquently demonstrated, graduate education is changing and will change even more rapidly in the years ahead. It is not my purpose today to comment further on the nature and substance of these changes. I have little new insight to offer on that topic.

The theme of the Conference does, however, relate to part of the reason behind the movement within the GRE Board and the GRE Program Direction staff to review the nature and purposes of the GRE Program and to offer for Board consideration a comprehensive plan for changes in the program over the next several years. I would like, this morning, to take a few minutes to discuss with you some of the plans that the GRE Board will be considering for possible adoption at its meeting later this month. These plans grow largely out of the influence and concern of the members of the GRE Board and in particular the GRE Board's Research Committee and reflect, I hope, much of the same thinking that has gone into the topics presented here at this conference.

The changes being proposed to the GRE Board represent as much a philosophy and a general plan as they do a specific approach to the problem of making the tests and the program better. That is, while the plans are rather complete and represent a considerable amount of study and thought, the Board is being asked to endorse going ahead with this general plan within the general framework outlined in the proposal. It is anticipated that as we get further into the problems of implementing the plan a number of significant changes and adjustments in the nature of the changes will have to be made. The amount of input from Committees of Examiners into the details of the project has, for example, been minimal to date. This means that discussions such as this and any ideas and comments generated from it after the conference can still have an influence on the final nature of the changes that will be made in the program over the next several years. I would hope, therefore, that you would be free with your reactions, comments, criticisms and suggestions either in the discussion that follows, in private conversation, or in correspondence with me.

We at ETS, and certainly the GRE Board, see the GRE Program as existing to serve the needs of the graduate schools and graduate students and are therefore most interested in getting the benefit of suggestions and ideas that you or your colleagues may have.

Background

The GRE Program has been essentially stable since 1951. It has offered basic tests of verbal and quantitative aptitude and tests of achievement in certain areas of graduate study. The tests themselves are constantly reviewed, revised and new forms developed, but the pattern of testing has remained constant.

At the same time, there have been changes in graduate education, in the nature of graduate admissions, in the volume of the program (candidate volume for the GRE has gone from slightly over 20,000 in 1958-59 to over 200,000 in 1968-69) and in the field of measurement on which the testing is based. This combination of factors plus, most importantly, the coming into existence of the GRE Board in 1966 with complete policy control of the GRE Program, resulted last year in a request from the GRE Board Research Committee, chaired by Dean Crawford of the University of Minnesota, that the GRE staff review the nature of the GRE Program and offer suggestions for changes in the program. What resulted from this request was a working paper on the future of the program which concentrated on what the tests might be rather than on what they had been. This paper progressed through several stages and was reviewed and commented on by the Research Committee and presented to the full GRE Board in September of 1969. The Board adopted the paper in principle and directed ETS to proceed with further development of the proposal, with cost and feasibility estimates and with the development of an implementation schedule. The Board will give final consideration to the paper later this month and, if adopted, work will begin toward implementation of the plan.

The revised working paper has been distributed to all members of CGS and I expect many of you have seen it. I don't want to take a lot of time describing what is in the paper, but I expect some brief review is both desirable and necessary to refresh you on the plans and to provide a base for describing what the projected schedule is and what some of the problems we anticipate are. With the indulgence of those who are very familiar with the content of the paper, and particularly those members of the Board who are present and who will have seen and heard this all too often, let me describe briefly some of the philosophy behind the proposed changes and what we are, in fact, suggesting.

The basic philosophy of the new program is that it should be structured in such a way as to serve to the maximum the various needs of graduate admission that can be feasibly handled through a national program. This means that the program of tests is intended to serve, not just a selection function, but also a placement, guidance, and discovery role. The test offerings are intended for this purpose, and interpretive and functional aids would be provided to facilitate these uses.

However, the selection function would remain primary in recognition of this as a continuing major problem of graduate education, and of its role in retaining the quality of graduate education; the other functions would be served as a by-product of the basic offerings. However, the increased information should assure the ability of the program to serve several functions adequately.

Secondly, the new offerings should produce a maximum of information as a result of the time devoted to the testing. The information is to be consolidated by intended graduate majors, both in terms of what is taken and in the normative information available, to provide for maximum utility within a discipline and for common information on all applicants within a discipline.

Thirdly, the new GRE will rest on a research base which, where possible, will provide evidence of the effectiveness of the modifications introduced into the program and will assist in the development of new instruments.

Fourthly, there should be sufficient adaptability in the future of the program to allow for the dropping and adding of modular units within the Aptitude and Advanced Tests as new measures are developed and/or proven, as curriculum changes, and as the needs of the program develop.

Finally, there is a philosophic commitment in the new GRE Program to allow for flexibility with an Advanced Test that is related to the particular needs of the discipline involved. It is not necessary, for example, as is true in the present GRE, that all tests produce a single total score (with two exceptions); rather the Committees of Examiners will be given considerable leeway within certain prescribed limits as to what they may do and what can be reported in the interests of meeting the needs of their discipline. Thus, it would be possible for a Committee to decide that its discipline was sufficiently homogeneous to support a single uniform test with subscores or to decide that the diversity of preparation required a common core with optional subtests depending on the student's area of undergraduate specialty.

Proposed Changes

A modular approach to the test structure is being proposed to allow for maximum flexibility. This means that the morning and afternoon tests will be composed of separately timed sections which singularly or in combination can yield reportable scores.

The morning test will be composed of two 30-minute modules and four 25-minute modules. One of the 25-minute modules will be for pretesting. One 25-minute and one 30-minute module will yield the verbal score and the other 30-minute module will yield the quantitative score. The remaining two 25-minute modules will be used to test in additional areas of aptitude or achievement of particular relevance to various disciplines.

The Advanced Tests will consist of two 60-minute modules and three 25-minute modules. The Committees of Examiners, with the help of consultants from the various disciplines, will have a choice in the manner in which they utilize the increased flexibility. All Advanced Tests will have a 25-minute pretest section. The tests may then either continue to offer a total score, provide subscores in addition to a total score, or give a score on a common subtest and on subtests that would be selected at the option of the student.

The optional material in the morning test will probably consist of, at the most, five different options. What would actually be included in these options remains to be determined, but there are a number of possibilities. These might include:

1. High Level Math Aptitude
2. Data Usage Skills
3. Logical Analysis
4. Writing Ability
5. Spatial Reasoning
6. Intellectual History
7. Basic Background in a number of areas.

We are hoping that the choice of optional material can be tied to the intended field of graduate specialty, but this will be dependent on the degree of cooperation and decision making that we can obtain from the various disciplines. If this does not prove feasible or fully workable, some type of student selection of options, perhaps within suggested guidelines, will be developed. Since allowing graduate schools to require a particular option, unless all were willing to agree on a particular option, would result in increased multiple testing, this does not appear to be a reasonable alternative.

It is possible that in the consideration of the future of individual Advanced Tests and the options open to them some committees will decide that an Advanced Test in their field is no longer practical or useful and will recommend to the Board that the test in their field be eliminated. The GRE Board has a set of criteria for determining the desirability and feasibility of adding new examinations to the program and these could serve to guide a committee seriously considering this possibility. Since the Board has dropped three Advanced Tests from the program, the notion of eliminating Advanced Tests for good reason is not without precedent.

It is the hope of the GRE Board and ETS that the changes proposed in this plan will, as they develop, create a GRE Program that builds on the strengths of the current program and creates a more useful and versatile program. However, the plan is not without its problems. Some brief review of some of these problems and of the proposed schedule may be useful.

Next Steps

A listing of the problems we anticipate in the implementation of the plan, if it is approved, may provide you with some better idea of the nature and magnitude of the task before the Board and ETS.

1. The identification, development, and decision making with regard to the optional materials for the morning test will be a major problem. Covering all fields of potential graduate study with an appropriate optional test may be difficult, if not impossible.

2. The development of reliable subscores from the Aptitude and Advanced Tests has required some modification of the standards usually applied to scores reported by ETS. While the lower reliabilities for subscores appear reasonable, their attainment could still be a problem.

3. The introduction of separately timed sections and a slightly longer afternoon testing session may well result in increased test administration problems.

4. While Aptitude Test scores will be on the same scale and use the same norms under the new as under the old system, it is possible that changes may be required in the scales for some of the Advanced Tests. This would mean, for these tests, that experience gain in the use of previous scores would no longer apply and that comparisons to previous scores would not be possible. Also in the first year of the introduction of the new tests, it will not be possible to provide extensive normative information on the new scores.

5. The dissemination of what is planned and how the new test results can best be used will be a continuing concern. Meetings of this type may provide a partial answer to discussing proposed changes and obtaining reactions and suggestions. Plans are being made to send a summary of the plan to all graduate departments if the proposal is approved. Workshops on the use of the new scores may be necessary and desirable at some future date.

If the GRE Board approves the proposal later this month, the present schedule calls for work to begin immediately on the development of model optional materials for the morning test for consideration of the Committees. The Committees of Examiners for the Advanced Tests and consultants appointed by the professional associations will meet during 1970-71 to discuss and plan the changes in their test. Some changes in the form of new or additional advanced Test scores will begin to appear in 1972-73 if the implementation proceeds on schedule, since the plan is to have all Advanced Tests in the new modular format by October 1972. However, only a relatively few tests would actually be prepared to offer additional scores at that early date. The new Aptitude or Morning Test would be introduced in October of 1973. All Advanced Tests would be restructured and reporting additional scores, if appropriate, by October 1974. Thus, the projected timetable for these changes calls for all the restructuring to be completed within 4½ years or by 1974-75.

It must be emphasized that the schedule just described is an ambitious one and assumes that everything goes about according to plan. If there are serious difficulties in any one of a number of areas, the schedule will be thrown off by from one to two years. It will be sometime in 1971-72 before we will know for sure if the October 1972 introduction date is a realistic one.

Conclusion

What I have attempted to describe here this morning are some changes contemplated by the GRE Board for major modifications in the GRE Program in the 1970's. In some ways the proposed changes reflect rather drastic modifications, but in another they are very limited. It is true that, if the changes are approved and go ahead on schedule, a quite different set of GRE results will be available on prospective graduate students within a few years. It is also true, however, that the results will, for the most part, be a continuation of the type of aptitude and acheivement measurement that we have traditionally been associated with in the GRE Program and at ETS. Present plans do not call for the introduction of non-cognitive measure, for computerized testing, for non-verbal testing, for non-test related services, or for particular programs for disadvantaged students.

The absence of these features in this plan should not be taken as a lack of ETS or Board interest in these areas. The restructured GRE proposal was developed with the idea of doing within a relatively few years what was possible, given the state of the art of testing and identifiable developments in graduate education, that would improve and enhance the Board's tests for graduate admission and other uses. Computerized testing may be the wave of the future, but it is a number of years away for national programs because of limitations in computer hard and soft ware, the high cost involved, and unresolved psychometric problems. Further research is required to develop tests in the non-cognitive area that are useful in a national testing program being used for selection pruposes. However, the proposed structure does provide a place for the introduction of such an instrument, if and when it is ever developed. A special topic for discussion at the Board's meeting deals with what the GRE Program can and should be doing to assist graduate schools in their work with disadvantaged students. A study of admissions and fellowship selection policies and procedures is presently underway as some of you know. A number of suggestions for additions or changes in the program that do not relate directly to the test are being considered by GRE Board committees. These are all areas of basic concern to the Board and are under active consideration in other context. To cover all the interests, concerns and activities of the GRE Board would take far more time than I have available this morning.

It is important to keep in mind, however, that the plans for restructuring the GRE Program represent only one part of the interests and activities of the Board. Plans are being made for sharing more widely some of these other interests.

As a final comment, I would like to reemphasize that the changes discussed today are still at the proposal stage and will be until the Board takes final action on the proposal. Even after that there is sufficient freedom in the proposal and in the action that the Board is considering taking to assure that further input can be made into these plans and to suggest that the end product may still differ considerably from what has been discussed today. Any ideas, suggestions and/or criticisms that you or your colleagues have of these plans will be most welcome and appreciated.

Thank you.

CLOSING

Otis H. Shao

Getting back to the point of time, I want to know the wishes of my colleagues. Would you like to spend about five minutes making some observations or asking some questions? Or perhaps we could break up for coffee and individually respond to the panelists. The coffee isn't here yet. Unless you have urgent questions, let me just bring this session to a close. The fourth general session will begin at 10:45. Thank you very much.

FOURTH GENERAL SESSION

Theme: "Changing Demand for the Product of Graduate Education"

Presiding: Robert H. Bruce, Univesity of Wyoming

INTRODUCTORY REMARKS

Robert H. Bruce
Dean, Graduate School
University of Wyoming

We have to watch our time so we can leave promptly at twelve to catch our planes or lunch as the case may be. Form and content, of course, belong inescapably together in all major systems and this includes the topics that we are talking about today in terms of graduate education. In one sense I think we could have gotten along without a break and just continue in terms of what we're talking about this morning. The technical name of the topic is "Changing Demand for the Product of Graduate Education" and our first speaker, a friend of many years for all of us is Dr. Wayne C. Hall, Director of Fellowships, Office of Scientific Personnel, National Research Council. The title of his talk is "The Graduate Marketplace: Current Status and Future Projections." Wayne.

THE GRADUATE MARKETPLACE: CURRENT STATUS & FUTURE PROJECTIONS

Wayne C. Hall
Director of Fellowships & Advisor for New Programs
Fellowship Office, Office of Scientific Personnel
National Research Council

INTRODUCTION

Since its gestation, birth, and early postnatal period as a formal educational enterprise in the late 19th century, and during the subsequent period of its rapid metamorphosis and development in the late 20th century, graduate education in the United States has evolved in both complexity and diversity. Only a cursory examination of the basic parameters and trends that have characterized and controlled its historical development establishes clearly that graduate education in this country has been experiencing a period of long-term exponential growth. Consequently it has assumed a position of increasing importance in the educational hierarchy. Although the overall growth trend has been upward since 1900, the rate of growth has not been smooth and continuous during the 20th century. Rather, the rate of growth reflects the condition of the times; fluctuations have coincided with periods of national emergency, economic recession and inflation. Significant examples are the marked decrease in the growth rate during the great depression of the 1930's, sharp drops during World Wars I & II, and the rapid period of expansion occurring during the post W. W. II era of a generally spiraling economy.

However, during the last quarter of the present decade storm clouds have again appeared on the horizon. The heretofore bullish trend has diminished and harbingers of doom suggest that the future graduate outlook is dismal if not one of impending crisis. On the other extreme, certain optimists predict that current conditions are only temporary and that the upward trends established firmly in the 1960's will continue for at least until 1980-85 if not to the year 2000. Needless to say, only history will record the ultimate answers. But it is obvious that the patterns of graduate education and its support are rapidly undergoing change. Additional changes are manifest and are destined to come. Although past history and current conditions do not necessarily predict the future accurately, they should be used as platforms from which enlightened and careful planning for the future can logically ensue. The existing storm signals are not to be ignored but they should serve as warning to wise mariners of impending problems and they should be the basis of deep concern to all involved in graduate education. To blithely assume that the status quo will persist unchanged, is to ignore in ostrich-like fashion the symptoms of the underlying malaise. Surely the leaders of the graduate flock are not susceptible to the well-known stance of this bird! But what about the flock?

The basic purpose of this paper, however, is to assess as accurately as possible the current status of the graduate marketplace. Then after reviewing the factual data base undergirding and controlling the assumptions, hopefully realistic projections will emerge from the otherwise murky crystal ball. A number of recent, often conflicting, reports on the status of employment opportunities, particularly in the popular press and the professional journals, are cause for confusion if not alarm. It is my intent to evaluate as realistically as possible, to separate facts from rumors, and to present the best hard-core data available to me. But let us first review briefly the data base on which other considerations rest.

THE DATA BASE

The pertinent facts are, or should be, well known to all of you. But it is still appropriate to refresh our memories. Regardless of how you cut it, graduate education in the U.S. has experienced a period of rapid growth since 1950, and this trend, perhaps with ephemeral but agonizing perturbations, should continue in the future (21). Using figures prepared for the Conference on Predoctoral Education in the U.S. (21)

sponsored by the National Academy of Sciences - National Research Council at Woods Hole last August, the following slides and data illustrating the various growth parameters, document this statement dramatically.

The number of doctorate-granting institutions has been doubling about every 20 years since 1945; 227 institutions granted research doctorates in 1968 (22, 23). The total number of institutions offering graduate programs reached 724 in 1967 and today this number probably exceeds 750 (21).

As shown in the figure 1-A, both the total and full-time number of graduate students enrolled in all fields has been doubling about every 10 years and the 1970 enrollments are expected to triple those enrolled in 1960. The total graduate enrollment by 1980 has been variously estimated; regardless of the accuracy of the various models, the 1980 enrollment, barring a national disaster, should approach 1.4 million (varying upward or downward by 100,000).

The number of doctorates granted has been tripling every 10 years since 1940; 9,734 were awarded in 1960 and about 30,000 are forecast for 1970 (22, 23, 24). Figure 2-A illustrates that the rate is projected to slow somewhat in the 1970's but it is estimated that the total number produced will probably exceed 60,000 by 1980. Actual figures for 1958-68 and projected numbers for 1969-80 for six broad fields of study are summarized in Figure 2-B. The relative position of the six broad fields in doctoral production can be noted in the graph.

Up until 1967 the increase in financial support of graduate education has been equally dramatic. But alas, as you well know, the financial picture has changed! In recent years substantial reductions in congressional appropriations has led to a sharp curtailment or suspension of several of the fellowship or traineeship support programs of the Federal agencies. Private funds have also been substantially decreased. Ceilings on expenditures imposed by Congress have had a serious impact on research funding, which in turn has restricted severely both predoctoral and postdoctoral support at many universities. Stabilized or decreased appropriations by many state legislatures have also reflected the economic mood imposed by the National Congress, with the eventual effect of reduced support for graduate programs and graduate students.

A number of studies reporting supply and demand projections for higher education including graduate education, individual disciplines, and for broad fields have been conducted (1, 2, 3, 4, 5, 6, 10, 11, 13, 14) during the last 20 years. Most authorities, with the exception of a few iconoclasts, notably Berelson (2) and Cartter (4), have prophesied a dire shortage on the output side of the equation. Up until about 1965-1966, several national commissions, most academic administrators, and most well-known educational chroniclers were still predicting a major crisis for trained manpower in the late 1960's and 1970's. A few have questioned manpower projections and budgeting on any grounds. As pointed out by Cartter (5) opposition to manpower budgeting is based primarily on two arguments. The first is in principle, that budgeting manpower demands without consideration of fianancial implications relies on a mechanical measure of opportunity costs that may not produce a socially

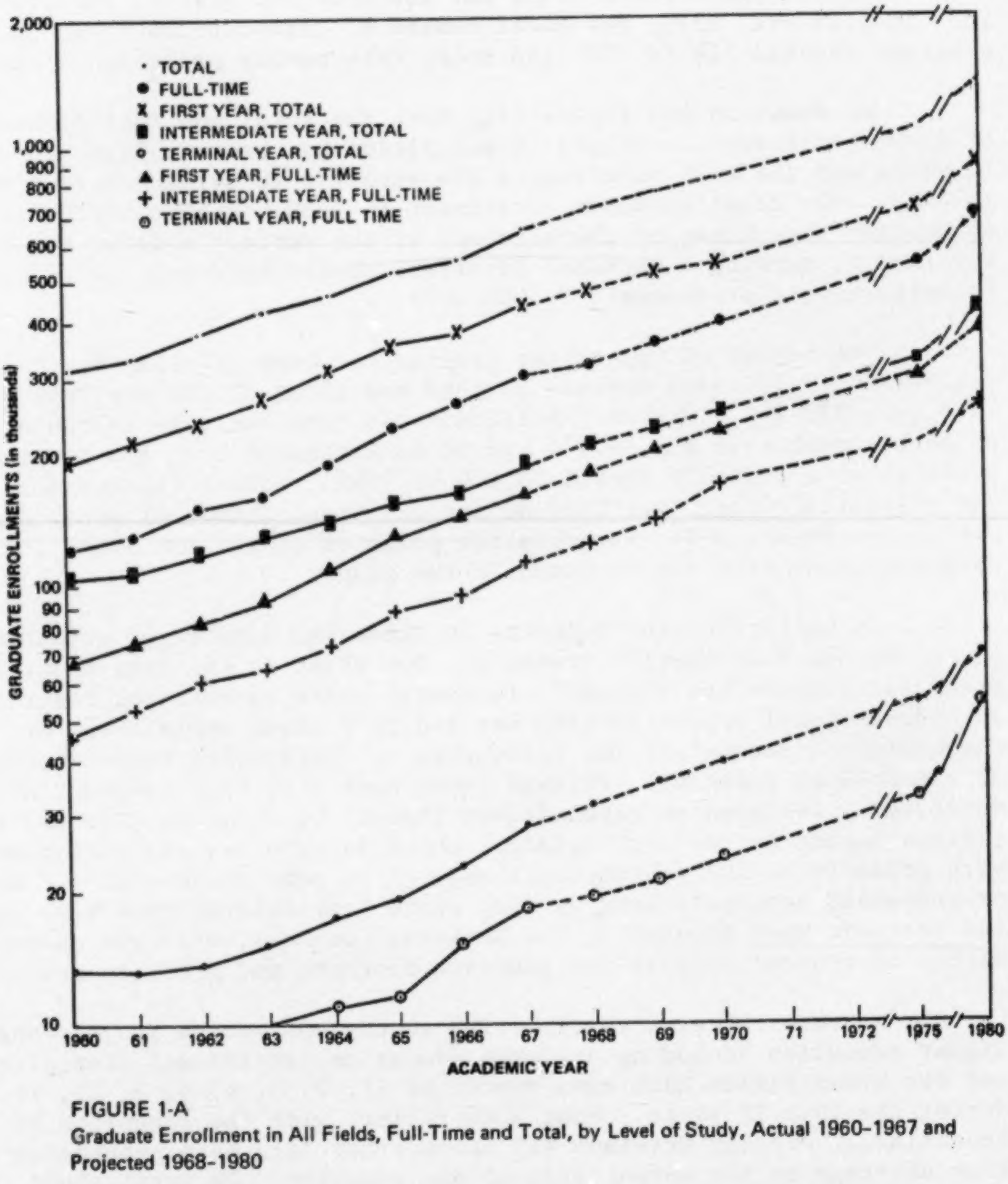


FIGURE 1-A

Graduate Enrollment in All Fields, Full-Time and Total, by Level of Study, Actual 1960–1967 and Projected 1968–1980

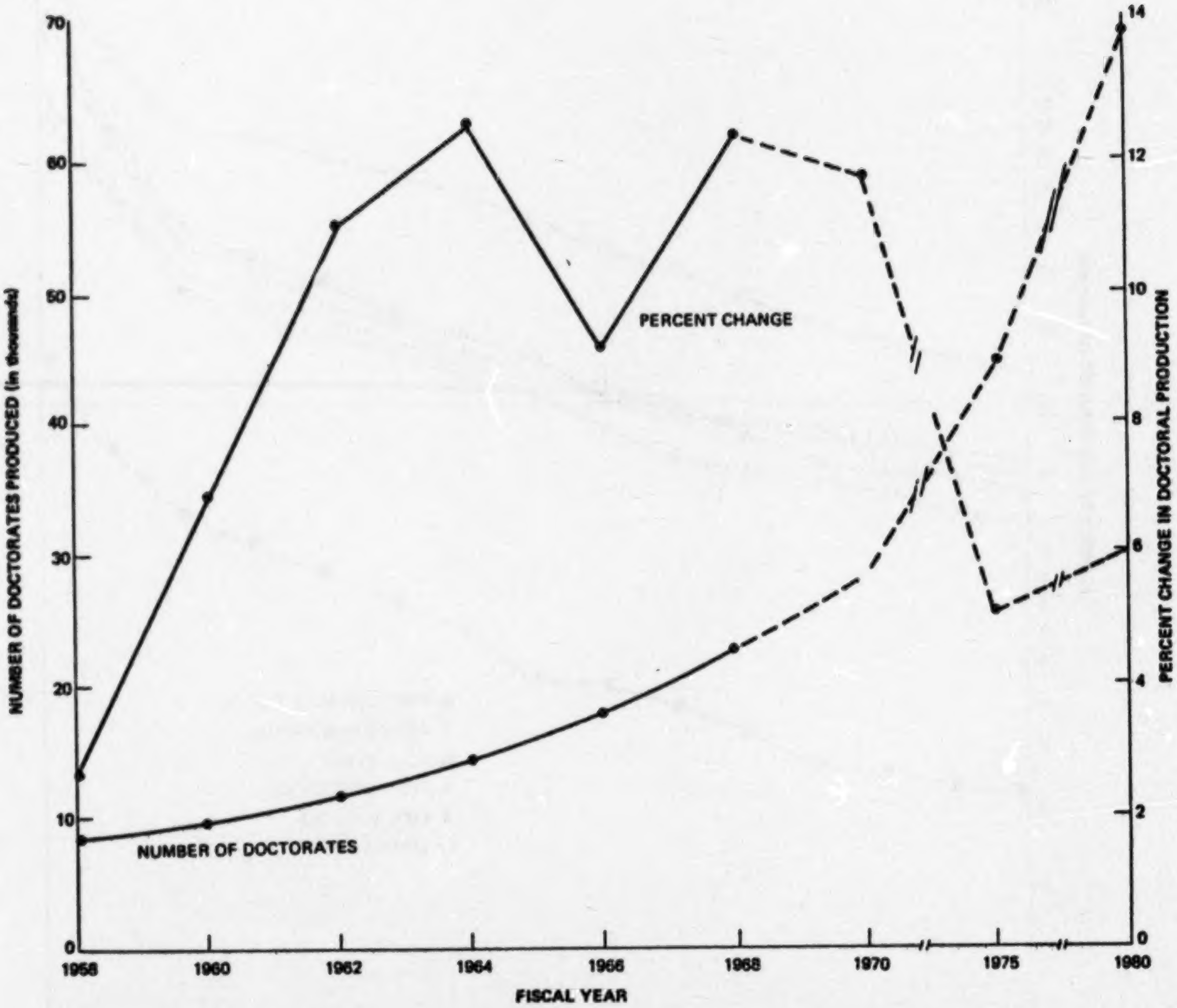


FIGURE 2-A
Number of Doctorates Produced, and Percent Change in Doctoral Production, Actual 1958–1968 and Projected 1969–1980

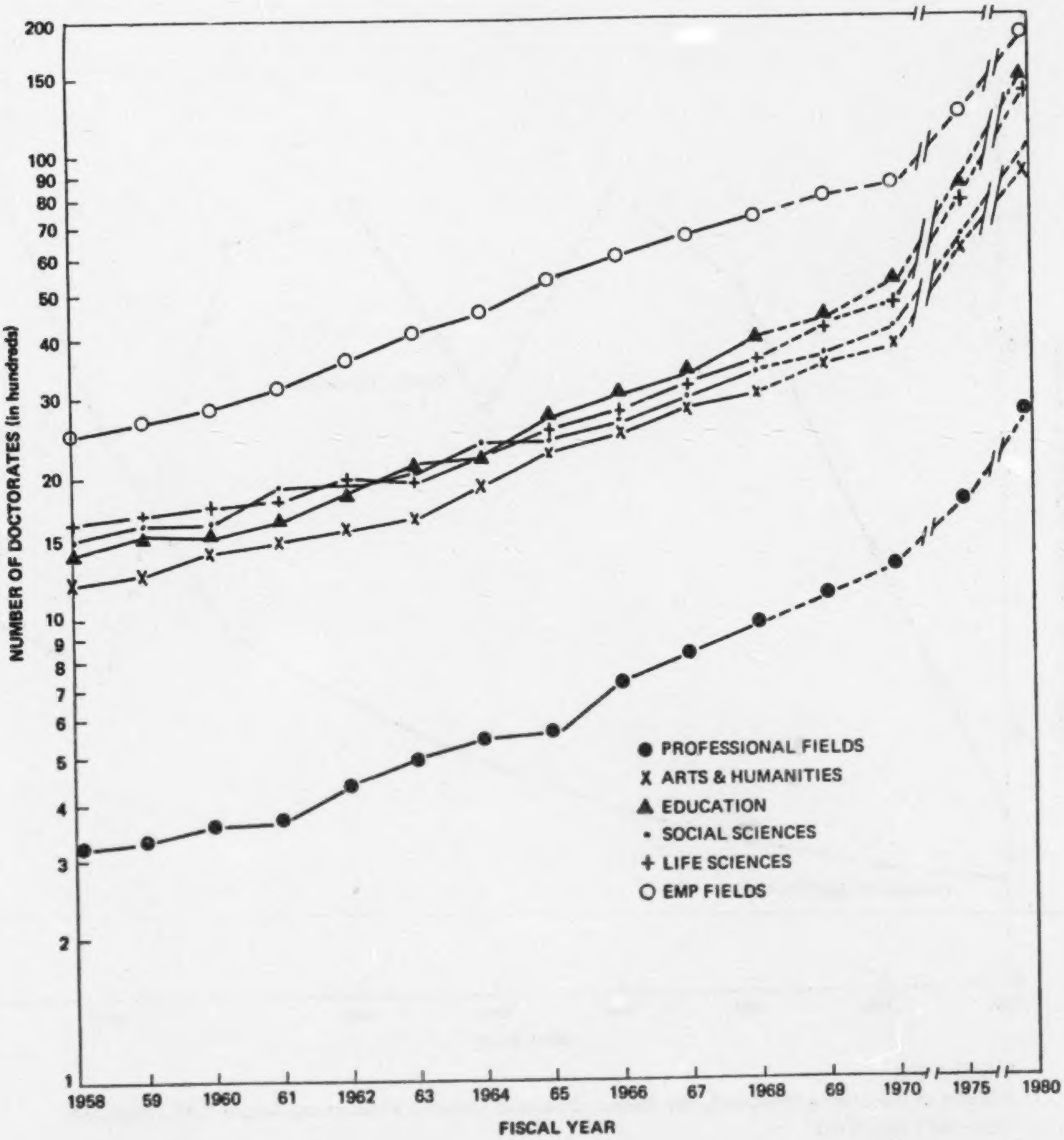


FIGURE 2-B
Doctoral Production in Six Broad Fields of Study, Actual FY 1958-1968 and Projected 1969-1980

rational solution. The second argument against strict manpower budgeting is that we do not possess very sophisticated means of projecting the impact of a major shift in demand.

I would argue in analyzing manpower models that it would appear, if logical assumptions are used, that the input side of the projection-equation is reasonably known and predictable. The number of really productive graduate schools and the potential graduate enrollment are fairly stable or amenable to prediction. For example, 25% of the graduate schools produce over 75% of the doctoral recipients now and should do so in the future, and the number of potential graduate students to be enrolled for some time are already in the system and the bulk of these, regardless of conditions, will continue in the pipeline. Therefore, if the production base and the raw materials available are known, the future output or end product of the graduate schools should be predictable within acceptable statistical limits. However, as indicated above by Cartter (5) the principal unknowns in this equation, which ultimately regulate the other factors, are the nasty constraints of the required capital investment or the financial input needed to support the rest of the system, and the employment opportunities or a change in the demand for the degree recipients once they finish. Unless these can be reasonably determined or predicted, the rest of the exercise becomes academic. Although supply and demand studies and data are important and useful in providing needed background information, the implications of the other factors just cited must also be considered and evaluated if a realistic assessment for the future is to have practical meaning.

It is beyond the scope of this paper, the intent or the ability of the author to forecast the financial future; suffice to say that all signs indicate only austerity and inadequate financial funding for graduate education in the early 1970's. It is obvious that the future support of graduate education will demand better documentation and justification. In competition with other pressing national problems, new arguments for financing graduate education will have to be devised and promulgated in the legislative halls. This may necessitate careful rethinking if not reshaping the very purpose, structure and direction of graduate education. I accept the premise of the National Science Board (16) that it is impossible to produce too many highly educated people only if these people are trained for different roles in society and are not misled in their expectations. Otherwise to assume that all of the highly specialized research-based Ph.D.'s our first-rate graduate schools are capable of producing in the future can be placed in prestigious universities or that their narrow research expectations can be met in the future is, in my opinion, highly fallacious, untenable, and illogical. But let us return to the main theme of this exposition--the employment outlook in the graduate marketplace--and devote the rest of the paper to this subject.

THE EMPLOYMENT PICTURE

GENERAL REVIEW: To clarify the terms of "current" and "future" as used in this paper, review of the current situation will be restricted mainly to FY's 1968 and 1969; whereas the future projections, to be treated in more detail subsequently, will encompass 1970 and beyond.

As already mentioned, up until 1965-1966 the evidence seemed to be clear: massive support for graduate education and research and the apparent scarcity of well-trained professionals suggested an expanding situation and a seller's market for new Ph.D.'s for some time. However, a deluge of reports, some conflicting, appearing in 1969-70 in the popular media and other outlets indicates that the graduate seas have roughened. It is not surprising to find that graduate students, the public, and the Congress are somewhat confused as to the employment situation and outlook for highly educated manpower when the educational community and the responsible Federal agencies themselves have been puzzled by conflicting evidence. In a late October 1969 issue of Science (19), Bryce Nelson began his article with the lead sentence "Is this country now producing more scientists than it can place in suitable scientific jobs?" Nelson indicated that the Bureau of the Budget seems to think so and is acting accordingly in budget planning (19). He cited BOB officials as stating that "the need for scientists has been greatly exaggerated," and that "graduate education has gotten too damn big for the good of the institutions." Then by means of interviews, he reported mainly anecdotal impressions and opinions which painted a generally dismal outlook across the board in the sciences. From this information, Nelson concluded that job prospects in most of the natural sciences is dimmer and cited the usual reasons, well known to all, for this: severe cutbacks of public support for R & D, especially at the Federal level; a rapidly rising increase in Ph.D. production; and a decrease of industrial employment of scientists in certain areas. Nelson recommended that four things should be done. First, more factual, comprehensive data on the supply-demand picture, by discipline, for scientific manpower should be collected. Second, the attitude of young scientists and their mentors in regard to employment alternatives other than in basic research may have to change. Third, the scientific community will have to work harder to convince Washington to appropriate the money necessary to create more scientific jobs. And finally, the "hard sell" for careers in science will have to be played down except for the most able and dedicated.

The December 29, 1969 issue of U.S. News & World Report portrayed a similar gloomy outlook in an article entitled "Tougher Times Ahead for Job-Hunting Ph.D.'s", which reported "a deepening slump in the job market for research scientists is sending shivers of apprehension through the academic community" (26). This source (26) noted that top research assignments in government, in industry, and at the universities are found to be much scarcer than a year ago, and reported that physicists, chemists, psychologists, and some mathematicians were currently feeling the pinch the worst. The U.S. News & World Report (26) quoted Dr. Charles E. Falk, Planning Director of NSF, as predicting that the squeeze will also soon be felt by biologists and other medical researchers. The pessimistic employment outlook for physicists and chemists was previously supported by accounts in the March, 1969 issue of Physics Today (25) and the November 24, 1969 issue of Chemical & Engineering News (7). According to figures published (25), 29.5% of the physicists awarded their Ph.D.'s in June of 1968 received no job offer and 32.6% received only one offer. Of those awarded the master's degree in physics at that time, 39.5% received no offer and 26.9% received only one offer. C & En (7) reported in what was quoted as a wide-ranging job survey "a dramatic reversal in the market for chemists and chemical engineers," and chemical employment indexes have declined this year (11.2% average drop), companies are generally holding the line on professional staff levels, recruiting plans are highly varied, and job evaluations are toughening." On the other hand, Chemical & Engineering News in their December 15, 1969 issue (8) painted a rosier prospect for new graduates on both the baccalaureate and master's level in business and industry by reporting, "despite the less than cheerful economic outlook for 1970 and signs of a tightening job market, new graduates at these levels still have reason to smile. . . . not only will companies be seeking more graduates next year than in 1969, but they will be offering higher starting salaries as well. At the bachelor's level, about 12% more jobs will be available starting at $36/month higher; at the master's level the demand will be up 22% and starting salaries will average $54 more per month." Further, C & En (8) noted that "engineering baccalaureate graduates continue to be the most sought after graduates, and on the master's level, people in accounting are in the greatest demand." The statement concerning employment for bachelor's degree recipients for engineering graduates was previously confirmed by Bulletin No. 14 of November, 1969 issued by the Engineering Manpower Commission of Enginers Joint Council, "despite some concern in reduced employment opportunities for new graduates, no such effect is apparent in this year's statistics for engineers . . . for all engineering curricula combined, 71.4% of the graduates were entering full-time employment this year compared to 67.8% last year . . . less than 1% reported having no job offers or plans," (11).

The report of the study conducted by the National Science Foundation of the Science & Engineering Doctorate Supply & Utilization 1968-80 appeared in November of 1969 (17). The NSF Report estimated that, as of January 1968, the number of Ph.D. level scientists employed in various activities in the U.S. was approximately 147,000. Nearly three-fifths (87,000) of the 147,000 doctoral scientists in 1968 were employed by universities and colleges, another one-quarter (39,000) were in private industry, and the remaining one-eighth were employed by governmental agencies (14,000) and other organizations (7,000). Based on enrollment projections, NSF forecast by 1980 a supply of about 350,000 science doctorates. Using somewhat different methodologies, NSF estimated a "basic" minimal utilization level ranging from 275,000 to 300,000 science doctorates and an "improved" utilization level possibly as high as 390,000 by 1980. It can be seen that by 1980 the expected number of science doctorates to be awarded lies about half way between the "basic" and the "improved" utilization projections. Dr. Falk (17), however, has stressed that significant numbers of Ph.D.'s are likely to be engaged in activities which are markedly different from those practiced by most present doctorate holders when he predicted "we will be able to use every scientist we turn out for the next 12 years (26)."

On February 8, 1970 the NSF released their most recent Science Resources Survey covering 1969 employment and 1968 financing of scientific activities in 2,175 institutions (18). This survey showed that the nation's universitites and colleges employed 253,500 scientists and engineers in January 1969 . . . and increase of 8.0% per year over the 217,200 total for January 1967. Life scientists constituted 41% of the total, followed by social scientists (21%); physical scientists (14%); engineers (10%); mathematicians (9%); and psychologists (6%). By highest earned degree, the employment of scientists and engineers in colleges and universities were as follows: Ph.D. or Sc.D., 43%; M.D. or other health-related doctorate, 18%; master's, 29%; and bachelor's or the equivalent, 10%. Colleges and universities employed 222,900 scientists and engineers in January 1969 on a full-time equivalent basis functionally allocated in teaching, 65%; research and development, 23%; and 12% in other activities (administration, extension, and clinical services). An additional 84,400 graduate students were supported as teaching and research assistants in science and engineering programs in January 1969. Universities also administered 36 federally-funded research and development centers employing 11,500 scientists and engineers. This was about a 4% increase per year over the number for January 1967 (10,000), or less than one-half the 8% annual rate of increase experienced by the universities during the 2-year period.

The outlook for employment of Ph.D.'s in other disciplines has been described as being equally gloomy for job hunters. I am sure you have all seen the accounts given in the January 12, 1970 issue of the Chronicle of Higher Education (9) and the January 23, 1970 story in the American Council of Education's Higher Education and National Affairs (12), which are typical of many reports, describing in rather stark terms the market situation in the humanities, history, economics and other areas. These accounts, and even more vivid stories appearing in the daily press, such as the New York Times (20), Washington Evening Star (27) and others purportedly report the true situation found by job seekers at the annual meetings of the Modern Language Association in Denver, the American Historical Association in Washington, and the American Economic Association in New York. The dramatic headlines, such as "New Language Instructors Find College Market Glutted," "Young Historians Find Jobs Scarce" and, "Suddenly Ph.D.'s Are a Glut on the Market," speak for themselves, although they may purposely overstate the case. Some of the representative figures cited, if they are reliable, are perhaps more realistic: A year ago, M.L.A. listed 595 college teaching vacancies in English, in December 1969 there were 387; in history, A.H.A. reports indicated over 2,000 candidates were competing for jobs at 225 colleges, but only 200 employers were recruiting. The seriousness in which the new Ph.D.'s view the situation was exhibited by about 80 disgruntled job-seekers at the M.L.A. meeting when they militantly demanded that the association provide unemployment pay and other services for them. The association membership responded by agreeing to give their proposal "sympathetic consideration."

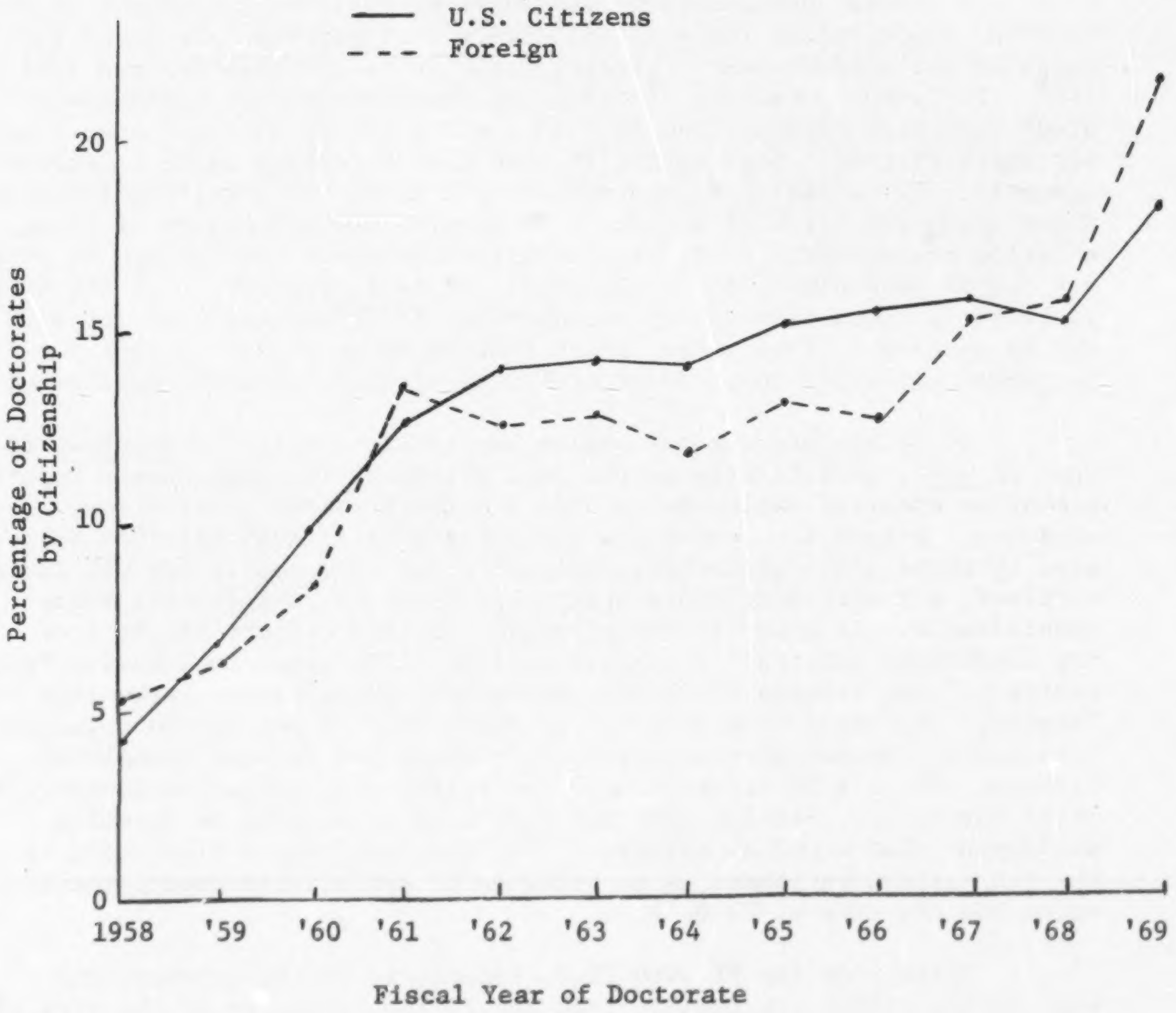
NATIONAL RESEARCH COUNCIL SURVEYS & ASSESSMENTS: As most of you know, the National Research Council conducts an Annual Survey of Earned Doctorates in the U.S. and the questionnaire results and accumulated records of these individuals becomes a part of the Doctorate Record File, (27) which is virtually a complete listing of all doctorate recipients since 1920. The questionnaires are distributed with the cooperation of the graduate deans and the graduates fill out the forms at the time they complete the requirements for their degrees. Certain of the questions pertain to their known or anticipated initial employment status or plans. Information about postdoctoral employment has been collected since 1958 and the typical response rate has been about 95-98 percent (27). The DRF covers all fields and is not restricted to the sciences and engineering.

A certain percentage of the doctoral recipients continue in postdoctoral study and/or research and Figure 3 illustrates the trend for those in the sciences and engineering fields by citizenship from 1958 to 1969. It can be noted that those going immediately into postdoctoral study increased rapidly from FY 1958 until about FY 1963 and then leveled off until FY 1968. However, in FY 1969 the percentage again increased abruptly. Illustrative of the sudden upsurge is the significant change occurring in the field of physics. In physics the percentage of those entering postdoctoral study has stabilized at about 20% through FY 1968 but jumped suddenly to 34% in FY 1969. In fact, one-fourth of the entire increase in those undertaking postdoctoral study between 1968 and 1969 was in physics. It is quite likely that at least a part of this increase represents those unsuccessful in finding permanent employment.

It is of interest to compare the results of the 1969 Survey to that of 1964, particularly as the data relate to the respondents reported actual or expected employment status and their postdoctoral primary work activity. Figure 4 compares the percentages of FY 1964 and 1969 doctorates by three major employment categories and citizenship for all fields combined, but excluding those accepting immediate postdoctoral study appointments. In general, the situation in 1969 differs little from the conditions existing five years earlier. The percentage having "signed contracts" had dropped slightly, and correspondingly, the percentage "seeking" increased from about 5% to about 10%. Those in the physical sciences and biosciences reported the highest percentages unemployed (12% and 13% or a 5% increase) and the social scientists the lowest (7% or 1% increase). Foreign citizens were less successful in locating employment than were U.S. citizens. The data indicate a tightening of the job market, but there is no evidence of appreciable unemployment among the new crop of Ph.D.'s.

Neither do the FY 1969 Ph.D. recipients in the sciences and engineering differ appreciably from the FY 1964 group as to the type of postdoctoral primary work activity they report (Figure 5). However, larger percentages of those in the physical sciences, life sciences and social sciences reported teaching as their primary work activity in 1969 as compared with 1964 and the date show a corresponding drop for those in these fields going into research and development. This may indicate that some of the 1969 doctorates are accepting teaching positions as a second choice to research. On the other hand, the engineers reported just the reverse--more were going into research and development and less into teaching in 1969 compared to 1964. The other fields, as might be expected, reported very small percentages in research in both FY's 1969 and 1964. Ninety percent of those employed in 1969 reported that their field of

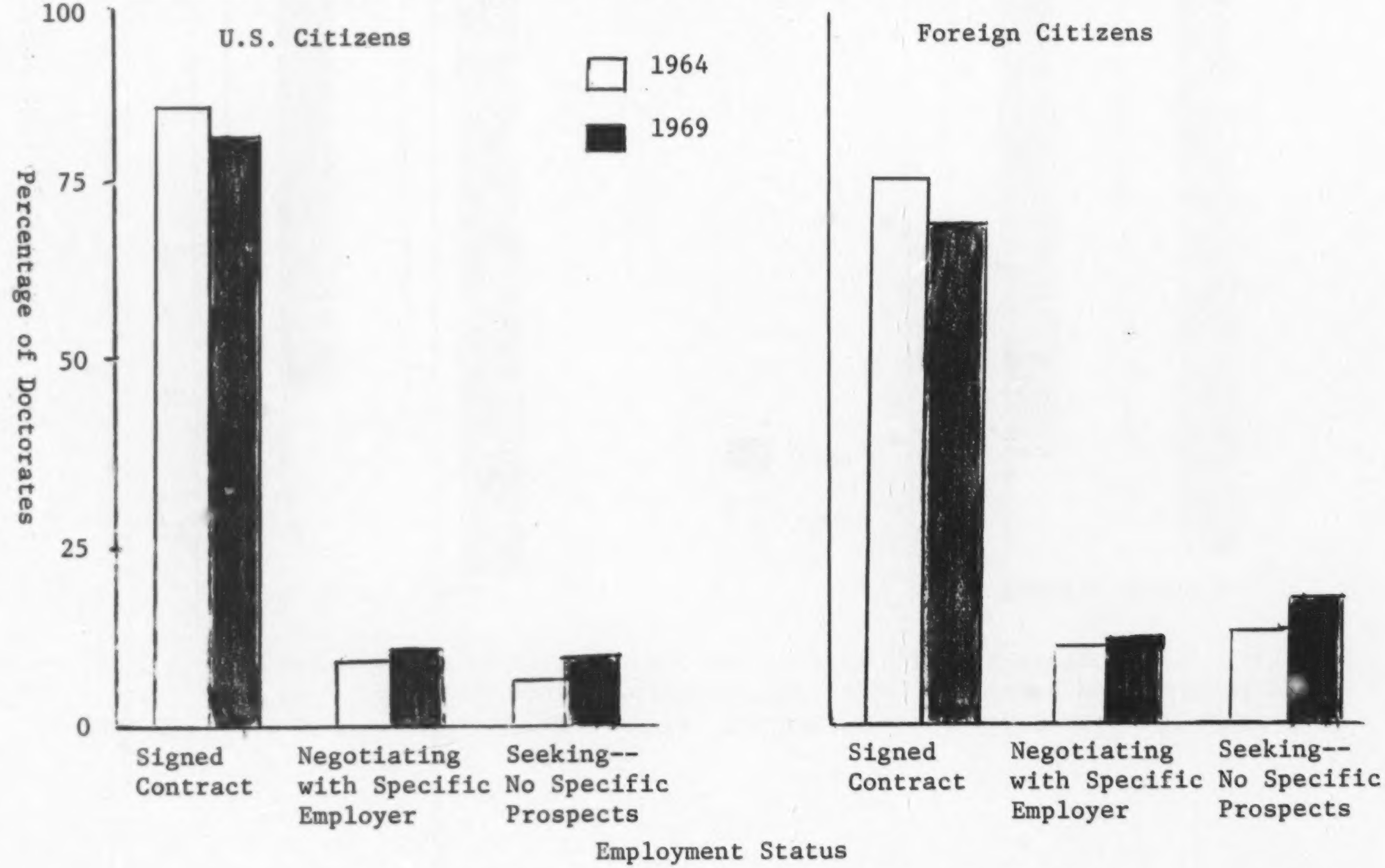
Fig. 3. Percentage of Science* Research Doctorates, by Citizenship, Taking an Immediate Postdoctoral Appointment, FY 1958-1969.



*Science doctorates include physical, biological, and social sciences and engineering fields.

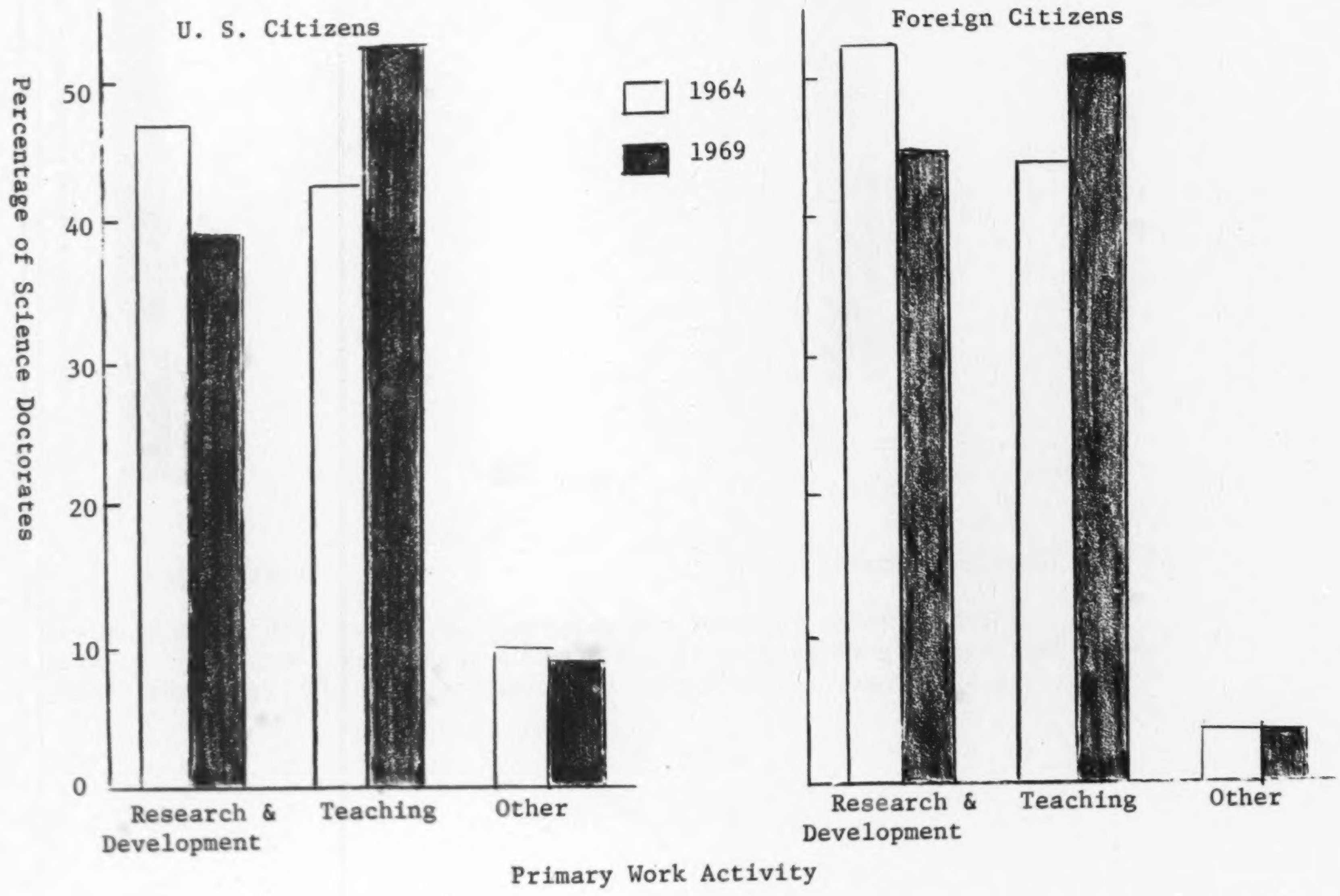
Source: NRC, Office of Scientific Personnel, Doctorate Records File.

Fig. 4. Percentage of FY 1964 and 1969 Research Doctorates by Employment Status at Time of Graduation, All Fields Combined, U.S. vs Foreign Citizens (excludes research doctorates taking an immediate postdoctoral appointment)



Source: NRC, Office of Scientific Personnel, Doctorate Records File.

Fig. 5. Type of Postdoctoral Primary Work Activity for Science Doctorates of FY 1964 and 1969, by Citizenship (excludes thost taking immediate postdoctoral study appointments; includes those who had already signed contracts).



employment was the same as that of their doctoral major or field of graduate training. This suggests that for most their skills are being utilized in jobs relevant to their graduate training.

Because of the widespread reports of unemployment of recent Ph.D.'s, particularly in certain fields, the National Academy of Sciences-National Research Council also conducted in early 1970 a Survey of Doctoral Employment of 1967-1968 and 1968-1969 doctoral recipients to supplement the DRF data with additional authentic information on this problem. The data obtained in the Survey of Doctoral Employment provides a somewhat different perspective of the employment status of doctorates since the information was obtained from the department chairmen rather than the doctorate recipients themselves and was restricted to the sciences and engineering fields. It includes results from 2,330 science and engineering departments graduating 78.6% of all science Ph.D.'s in the two-year period of 1967-1968 and 1968-1969. The returns have been tabulated and a paper is being prepared for official publication of the results. Other reports are scheduled to be released shortly. Therefore, at this time, although I can not report the details of the Study, it can be stated that the results of the Survey of Doctoral Employment in general confirm the data in the DRF and show that very few Ph.D.'s are unemployed and very few are employed in work irrelevant to their graduate training. Slightly less than 1% (0.9%) of all of the doctorate recipients in the sciences in the two-year period were reported to be unemployed and only 0.6% were reported to be in positions irrelevant to their disciplinary competence. There were variations by fields, but the differences were non-significant compared to the national averages computed for all fields.

CONCLUSIONS AND PROJECTIONS

After sifting the conflicting information and analyzing the most reliable data available, the somewhat murky image for the current supply and demand situation for highly trained personnel that begins to take focus is that production continues to expand while the job market tightens. However, there is no substantial evidence that there is any appreciable unemployment for Ph.D.'s finishing in 1968 or 1969. To probe the crystal ball in order to diagnose and project the immediate future with any reliability becomes a much riskier proposition. Others have been much bolder in assessing the future. Cartter (5, 6) visualizes 1970 as the "year of the transition" and the time when supply and demand relationships for teachers begin to undergo a dramatic change. He believes that "between 1970 and 1975, there should be a slight surplus--more marked in some subject areas, and continuing shortages in a few scientific fields. After 1975, it appears that the surplus will widen. By 1980, when it is expected that approximately 46,000 Ph.D.'s or equivalent degrees will be awarded, and when the past experience would indicate that about 23,000 would seek academic positions, only about 9,000 new teachers with the doctorate will be needed to maintain the existing quality of faculties. The total number of new teachers required to meet death and retirement needs and to handle anticipated enrollment increments averaging about 200,000 in the 1975-85 decade would be about 18,000." However, Cartter (5, 6) concludes". . . no one really expects Ph.D.'s to be selling apples on street corners by 1980 . . . and, . . . a declining demand for college faculty, concurrent with a substantial expansion in output from graduate education programs, will not result in unemployment." In short, the apparent surplus of highly trained persons will be absorbed by counter demand movements and shifts into other employment outlets. On the other hand, Geoffrey H. Moore, Commissioner of Labor Statistics in the Department of Labor, was quoted by Higher Education and National Affairs (12a) as predicting in testimony before a House Subcommittee on December 18, 1969, that "If present trends continue, a large surplus of elementary and secondary school teachers will be produced during the 1970's." Moore (12a) believed that overall, the supply and demand for college graduates is likely to achieve a balance during the coming decade, but there will be shortages in some areas and a surplus in others, notably school teachers, mathematicians and life scientists. He projected job openings for elementary and secondary school teachers at 2.4 million during the period from 1968-80, compared with a new supply of 4.2 million, or three-fourths greater than the demand: Moore predicted shortages for doctors, dentists, chemists, physicists, geologists, geophysicists, counselors, social workers, urban planners, city government administrators and probably engineers during the next decade. I am sure that Moore was referring to less than Ph.D. level openings when he made these forecasts.

Slightly earlier in 1968, the Association of American Universities Report (1) stated that the instructional and professional staff in U.S. colleges and universities doubled from 1955 to 1965, going from 236,000 to 465,000. But more germane to the present discussion, this group (1) projected a need for 500,000 additional Ph.D.'s from 1968 to 1975, 250,000 for college and university faculty, and 250,000 for other fields. In addition the AAU Committee postulated that to maintain the present ratio of trained manpower to population will call for 100,000 more physicians and 2 million new elementary and secondary school teachers between 1965 and 1975. The AAU projections admittedly may be in error or poorly estimated, since the model or base used for computing the estimates is unstated.

Regardless of the accuracy of the many predictions for future manpower needs, it is obvious that employment opportunities for doctorates currently have retrenched in many areas and this trend no doubt will become still more aggravated in the early 1970's. However, in comparing the present situation to the 1960's, most tend to overlook that we are comparing to an abnormally high base period. The high rate of Ph.D. production should continue for sometime and this rate coupled with a tightening job market condition will cause the employment of Ph.D.'s to become even more acute, but not disastrous, in 1971, 1972 and 1973. Beyond this point it would be precarious for me to attempt to assess the future because of the multitude of unknowns.

Overall, I would agree that there is little danger of producing an oversupply of highly trained (doctorate-level) people in the U.S. as long as high standards of education are not sacrificed (16, 21), training and preparation for different roles in society are planned for and implemented, and postdoctoral expectations are not misrepresented to the ones most directly concerned--the graduates.

However, I agree fully with the NSF Report (17) and with Falk (26) that many of the future doctorates will have to be deployed into areas other than careers in basic research. If they are not, and if graduate programs are not reorganized to accommodate other interests, then I see only serious employment problems, frustration and bitterness ahead for doctoral level graduates for sometime. Monitoring of the situation should definitely continue. Careful studies by national groups of the total problem, as well as individual studies by disciplines, should be conducted in order that timely and up-to-date read-outs can be made when required to guide remedial measures and the solutions needed.

Needless to say it behooves all of us to urge and support adequate financing of quality graduate education, otherwise the potential outlook for the mid-1970's may deteriorate even more than feared. New Ph.D.'s may not be selling apples on street corners by 1980--but graduate deans may be, either by necessity or choice!

LITERATURE CITED

1. Association of American Universities. The Federal Financing of Higher Education, Report No. 2. 1969.

2. Berelson, Bernard. Graduate Education in the United States, McGraw-Hill Book Co. 1960.

3. Carnegie Commission on Higher Education. Quality & Equality: New Levels of Federal Responsibility for Higher Education. Special Report & Recommendations by the Commission. December, 1968. McGraw-Hill Book Co. 1968.

4. Cartter, Allan M. An Assessment of Quality in Graduate Education. American Council on Education, Washington, D.C. 1966.

5. Cartter, Allan M. The Economics of Higher Education. Contemporary Economic Issues, Edited by Neil W. Chamberlain. 1969. Richard D. Irvin, Inc.

6. Cartter, Allan M. and Robert L. Farrell. Academic Labor Market Projections and the Draft. The Economics & Financing of Higher Education in the United States. Joint Economic Committee, Congress of the United States (U.S. Gov't. Printing Office, 1969).

7. Chemical & Engineering News. Chemical Employment Situation Tightens. November 24, 1969.

8. Chemical & Engineering News. Job Outlook: More for Grads. December 15, 1969.

9. Chronicle of Higher Education. Many More Ph.D.'s, Fewer Faculty Openings Lead to a "Buyer's Market" in Academe. January, 1970.

10. Educational Record. A New Look at the Supply of College Teachers. 1965.

11. Engineering Manpower Commission of Engineers Joint Council. Bulletin No. 14. The Prospects for Engineering Graduates. November, 1969.

12. Higher Education & National Affairs. a: Ph.D. Registrants at New High, Jobs at New Low, College Registry Finds. Volume XIX, No. 3, American Council on Education. January 23, 1970.
b: Government Statistician Predicts Large Surplus of Teachers in the 70's. Volume XVIII, No. 44. December 19, 1969.

13. Lee, Calvin (ed). Improving College Teaching, Future Faculty Needs and Resources. American Council on Education, 1966.

14. Maul, Ray C. Teacher Supply & Demand in Universities, Colleges and Junior Colleges, 1961-62 and 1962-63. N.E.A. Research Report. 1963-R9.

15. Miller, John P. Graduate Education. The Encyclopedia of Education. 1967.

16. National Science Board. National Science Foundation, Wash., D.C. Graduate Education. Parameters for Public Policy and, Toward a Public Policy for Graduate Education in the Sciences. 1969.

17. National Science Foundation. Science & Engineering Doctorate Supply & Utilization 1968-80. NSF 69-37. November, 1969.

18. National Science Foundation. Science Resources Surveys. NSF 70-108. February, 1970.

19. Nelson, Bryce. A Surplus of Scientists? The Job Market is Tightening. Science, Volume 106. October 31, 1969.

20. New York Times. Suddenly Ph.D.'s Are "A Glut on the Market." January 4, 1970.

21. Office of Scientific Personnel, National Research Council. Report of the Conference on Predoctoral Education in the United States. Woods Hole, Mass. Aug. 24-27, 1969.

22. Office of Scientific Personnel, Research Division. Doctoral Recipients from United States Universities 1958-1966. Publ. 1489. NAS, Washington, D.C. 1967.

23. Office of Scientific Personnel, Research Division. Summary Report 1968 Doctorate Recipients for United States Universities. OSP-MS-2. April, 1969.

24. Office of Scientific Personnel, Research Division. Doctoral Records File. 1969.

25. Physics Today. The Graduate Student. Where Does He Come From? Where Does He Go? March, 1969.

26. U.S. News & World Report. Tougher Times Ahead for Job Hunting Ph.D.'s. December 29, 1969.

27. Washington Evening Star. December 30, 1969.

THE GRADUATE SCHOOL-INDUSTRY PARTNERSHIP

Philip B. Swain
Director of Management Development
The Boeing Company

In a report dealing not with the graduate schools, not with undergraduate programs, but with the elementary and secondary schools, Dean John Goodlad of UCLA's Graduate School of Education concludes as follows:

> *"One important question remains which has scarcely been asked at all: What kinds of persons do we wish our schools to produce? We suggest that it be made the focal point of tomorrow's curriculum deliberations and of many more discussions to come."*[1]

The answer to Dean Goodlad's question--"What kinds of persons do we wish our schools to produce?"--will involve contributions from many elements in our society, and your program indeed provides for several of these. Your invitation to me, I take it, reflects a hope that I may throw some light on the question from the vantage point of industry. This I shall try to do, with the disclaimer that presuming to speak for all industry is roughly as hazardous as I would imagine it to be to presume to speak for all higher education, or indeed for the entire faculty of one graduate school.

When Dean Rice first talked with me regarding this panel, I ventured to suggest the concept of "partnership" as an appropriate keynote for considering the graduate school/industry relationship. To some of you, this may seem reaching a bit, and I would be the first to concede that there are many portions of the university's total role that are only indirectly if at all involved in that partnership. Nevertheless, there are two interfaces, if I may use that term, in which the partnership is or should be a very close one, and I shall direct my comments to them. The first is your provision of graduate degree programs for men and women employed in industry--both before they come to us and while they're employed by us--and the second is what has come to be called "continuing education"--i.e., the provision throughout the individual's career of opportunities for updating, refreshing, and diversifying.

---

[1] Goodlad, J. I., R. Stoephasius, and M. K. VonKlein, The Changing School Curriculum, A Report from the Fund for the Advancement of Education, New York, 1966.

Let me first, then, speak to the role of the graduate schools in meeting industry's needs for holders of advanced degrees. With respect to this role, I shall comment (a) generally with respect to all graduate disciplines, (b) with particular respect to the graduate business schools, and (c) with particular respect to graduate programs in engineering and the sciences.

That there is a vital connection between graduate school programs and a successful and competitive American industry there can be no doubt. The Engineering Master Plan Study for the University of California[2] calls attention to such dramatic examples as the following:

> *"The U.S. agricultural miracle continues to confound the world, while the partnership between the farmer, the U.S. agricultural extension and the land grant college remains in full effect. On the other hand, we find that our present dependence upon Sweden for extra high voltage d.c. power transmission equipment and technology follows a long period of declining interest in electrical power processing in U.S. engineering schools."*

First, then, with respect to all of the graduate disciplines which a company such as Boeing employs, is the expectation that your graduate students will come to us prepared to deal effectively with change. As we look into our future, we see not only changes in our products, our customers, our technology, and our management systems, but also changes in the environments of industry. Along with a continuation of the relatively well structured problems of industry--to the solution of which computerization will make continuing contributions--we foresee ourselves increasingly dealing with less well structured problems, with less predictable external constraints, many having sociological and environmental aspects which we have not faced up to in the past.

As illustrative of what is involved, I would point to the growing recognition in engineering schools of the importance of those technical problems which have a sociological component. Another example--among many others--would be the new course on "Issues in the Environment" which is required of all first-semester students in Cornell's Graduate School of Business and Public Administration, and which encompasses questions of poverty, housing, and race relations, to name just a few.

Finally, with respect to graduate programs generally, let me from an industry standpoint commend one of the recommendations in Allen B.

---

[2] Engineering Advisory Council, University of California, An Engineering Master Plan Study for the University of California, Berkeley, 1965.

Rosenstein's A Study of a Profession and Professional Education,[3] known to many of you, I am sure, as the final publication and recommendations of the UCLA Educational Development Program. That recommendation is that there is need to institute and maintain on a regular basis broad surveys--involving both the professional societies and educational agencies--which will provide for determination of (a) the projected needs of society to be satisfied by the professions and (b) future requirements for professional men by type, quantity, and educational level.

From those general observations, I shall now turn more specifically to the role of the graduate business schools. As I am sure you know, we in industry look to the two-year MBA as an important resource, and we compete vigorously for the annual crop of graduates. We are attracted by the fact that in a great many cases they have undergraduate degrees in engineering or science. We know that they have been rigorously screened in the process of getting into and graduating from the top MBA schools. Still another aspect of their appeal is the specialized training in advanced quantitative methods which they are receiving, and for which we are finding increasing need.

Our assimilation and use of the MBA is, however, not without problems. Many of these problems, we know, are of our own making. You will find in industry today many concentrated efforts to do a better job in this regard. In the case of some of the problems, we think that you may be able to help. To put the matter very briefly, we find that quite a few MBA's would benefit from a more realistic orientation to what it is like to have a career in an organization that (a) is large and (b) exists to produce a product or service at a profit.

With respect to largeness, we find MBA's frequently impatient of the time it takes to reach a level in the organization at which they make decisions affecting many component parts of the enterprise. Frequently, they seem tempermentally more adapted to the role of entrepreneur--and of course we need entrepreneurs in our society--but we also need people who can function effectively in the large organizations that are vital to our economy and our society.

With respect to profits, we find increasingly a disposition to think of them as somehow being automatically generated, and to think of the really exciting part of business as the application of those profits to the solution of social and environmental problems. As I hope to indicate, I believe that those problems are important, but accomplishment of the enterprise's basic reason for existence is fundamental and must come first. Let me recommend a film which does a much better job than I of articulating the expectations for involvement in social and environmental problems that are held by one group of graduate students in business. Its title is "Voices of Tomorrow," produced by Stanford Research Institute. In a series of campus interviews, these students reflect both what strikes me as a commendable motivation toward working on persistent social problems, and also a certain lack of realism with respect to the need for a company to be successful in our competitive economy before it is free to turn its attention to those problems.

---

[3] A Study of a Profession and Professional Education, by Allen B. Rosenstein, School of Engineering and Applied Science, University of California, Los Angeles, 1969.

Let me turn to another aspect of the partnership between graduate schools of business and industry to which we shall need to give increased attention in the years ahead. I refer to the continuation into the 70's of the needs of which we have all become aware in recent years for the hiring, training and upgrading of minority personnel, including the so-called hard core. And although we have unfinished business before us in the hiring and training of minorities, it is in the upgrading of those hired that we are faced by the largest challenge. A part of this job will have to be done by industry, through the provision of training and developmental opportunities that will enable our own present minority employees to advance into supervision and up the management ladder. But an improtant part of this job will also have to be done by the graduate schools of business administration. A recent Wall Street Journal story[4] both indicates the challenge and suggests that some steps are being taken to meet it. Reporting on a survey by the Alfred P. Sloan Foundation, the Journal observes that despite some recent efforts less than 2.5% of the students in 15 major graduate business schools are from minority groups. It goes on to say that the Foundation has given a newly created council of nine graduate business schools a $1 million grant to provide more fellowships and counseling for minority students. Harvard, furthermore, has assigned a faculty member to raise fellowship funds for black MBA students. There are signs, then, that the business schools are tooling up to play their part in making it possible for minority employees to take their place in corporate management. We recommend that effort and would suggest that it be kept in view in the years ahead.

In my comments thus far on your role of preparing holders of graduate degrees for the needs of industry, I have touched on graduate programs generally and on programs of the graduate business schools specifically. I should now like to offer some specific observations with respect to the graduate programs in engineering and science that are of particular significance to the industry in which I am employed.

Although I shall later have some comments about the job yet to be done by the graduate engineering and science faculties in the area of continuing education, it is a fair generalization that industry has no major suggestions for change in the present graduate degree programs. In this sense, we are in agreement with the findings of a recently completed National Science Foundation study, which I quote briefly on this point:

---

[4] February 10, 1970

> *"There is little demand for radical changes in the academic programs leading to degrees, although, to be sure, recommendations for improvements are made, and there are expectations of continuous development and growth in education."*[5]

When in 1966 my company's Vice President-Engineering addressed the Annual Meeting of the American Society for Engineering Education, commenting on the Goals of Engineering Education study,[6] his observations on graduate degree programs were to the same general effect. They included the following:

1. Master's and PhD Degrees in Engineering (following, incidentally, on a recommended five-year Bachelor's Degree providing for more specific proficiency in the Engineering discipline of the student's choice) should preserve the traditional emphasis on research. With the undergraduate programs providing emphasis on application of knowledge to the solution of Engineering systems and the development of hardware--both extremely important to us--the graduate programs would then provide us with both (a) a small number of outstanding people with the research skills on which our future depends, and (b) a limited number of graduate degree holders who have worked on advanced design projects emphasizing "state of the art" skills relatively more than research skills.

2. The curriculum for Engineering students needs broadening, both in subject matter contributing to the individual's ability to work effectively with other functions and disciplines found in the modern corporation, and also in subject matter helping equip the engineer to participate broadly as a member of society in developing solutions to the problems of our society.

3. Analysis, synthesis, and design of systems should--as recommended in the Goals report--be given increased emphasis in Engineering curricula at all levels.

I think that I can vaguely sense the dilemma posed for men in this room by these expectations for additional content in graduate programs, particularly when placed in the context of the ever more rapid tempo of the knowledge explosion, with all of its implications for curricula. We think we hear you saying, however--as in the Rosenstein study to which I have already referred--that new approaches to curriculum development provide hopeful answers. Instead of reserving blocks of units for the various subdivisions of an Engineering discipline, with occasional committee re-examination, we see you moving toward a search for more efficient and more lasting organizations of knowledge. To quote Rosenstein:

---

[5] Continuing Education for R&D Careers, National Science Foundation Document 69-20, U.S. Government Printing Office, 1969.

[6] Interim Report of the "Goals" Committee, Committee on Goals of Engineering Education, American Society for Engineering Education, April, 1967.

> *"With new information about the characteristics and behavior of our world, we are beginning to see with increasing clarity the basic underlying structure of this world. The boundaries between traditional disciplines have disappeared as apparently unrelated phenomena, formerly taught from empirical evidence, can now be explained by common, fundamental concepts."*

From the observations which I have offered on your role of making graduate degree programs available to men and women both before they come to work for us and (in some cases) while they're employed by us, I turn now to the second role that we in industry see for you as partners with us--the role of providing opportunities for continuing education of the individual employed in our companies. On this point the National Science Foundation study already referred to speaks directly to the roles of the two partners. It concludes that there are at least two areas in which the universities should assume leadership--one being research on continuing education activities, and the second being in setting the standards of quality for short intensive courses and for non-credit courses of longer duration. The report continues as follows:

> *"On the other hand, the universities do not now and should not be expected to supply all the effort in continuing education. Rather, continuing education in the sciences and engineering, and perhaps in all professions, should be a collaborative effort between universities training professionals, the societies which represent their interests, their employers, and the professional person himself. What university faculty can contribute to this collaborative effort is not only their knowledge and experience with teaching but also their knowledge and experience in experimenting with, studying, and evaluating the modes and methods of learning."*

The Joint Advisory Committee Report on Continuing Engineering Studies[7] indicated that--by contrast with what we have said already about the general absence of demand for radical changes in degree programs--there is widespread expectation that the universities will provide more programs of a non-degree nature that have the objectives of refreshing, updating and diversifying. These activities should be designed to maintain the individual's competence in the fields of knowledge and technology pertaining to his present work or work that he anticipates in the near future. In short, continuing education is practically oriented toward continuing development of the individual in a total context of the knowledge explosion and in particular the explosion in technology. It involves responses significantly beyond simply allowing non-credit registrations in credit courses held on campus. It involves short intensive courses specifically tailored for this purpose, symposia, seminars, and non-credit courses specifically conceived for the updating, refreshing or diversifying objectives to which I have already referred.

---

[7] Continuing Education Studies: A Report of the Joint Advisory Committee, New York: Engineers' Council for Professional Development, and Others, 1965.

One part of the challenge in continuing education that is of particular interest to industry relates to the needs of our managers. The continually accelerating tempo of the knowledge explosion suggests the needs we have and will have for technology-oriented education programs for engineering managers who have been away from the academic engineering world for a while and need technical renewal. Here we see the universities increasingly accepting the challenge and providing the programs--a month or more in length--under such titles as "Modern Engineering for Engineering Executives" and "Modern Engineering for Managers." These are offered by several institutions, including the University of Washington, UCLA, University of Texas, Cornell, and Brooklyn Polytechnic Institute, among others. Still another aspect of the continuing-education-for-managers challenge to which the universities are addressing themselves is that of advanced management programs enabling the participant to acquire new or heightened understandings regarding such subjects as the design and implementation of management systems, organization behavior, the environments of business, and the functioning of the economic system. Here, too, our neighbor, the University of Washington, is one of those offering such an executive program, and their efforts along with those of other major institutions across the country have been of real value in conjunction with our own internal efforts to ensure continuing management competence.

As I approach the conclusion of these remarks, I hope that I have not seemed to be a spokesman for a demanding partner that is unappreciative of the other goals that your graduate faculties must pursue. Perhaps if I listen carefully to the rest of today's proceedings I will be able to carry back to my company some of the suggestions that the other party to our partnership may have.

Finally, however, let me say that from the vantage point of industry there is no question but that our partnership with the graduate schools is an indispensable ingredient of our future success. As I have indicated to you, we look to you for filling two highly important roles--that of sending to us the holders of graduate degrees, and that of providing an important part of the need for continuing opportunities for members of our staffs to meet their needs for updating, refreshing or diversifying.

CHANGING DEMANDS OF THE COLLEGE: THE DOCTOR OF ARTS DEGREE

Joseph L. McCarthy
Professor of Chemical Engineering &
Dean, Graduate School
University of Washington

It's hard to imagine that anything further could be said about the Doctor of Arts degree after the excellent addresses given yesterday by Dr. Gustave Arlt and Dr. Mina Rees and the subsequent discussions yesterday and today. But I do have certain comments to make in the next few minutes.

It seems to me that we must recognize the fact that we move ever more toward specialization as man develops and, in recent years, perhaps we move increasingly rapidly toward specialization in view of the enormous growth of knowledge.

The Academy which once did all things is now specialized into institutions of quite a number of different types. At first one distinguished simply between the schools and the colleges. Then schools became differentiated into the high schools, the junior high schools, the elementary schools and the kindergartens. The colleges differentiated into community colleges, junior colleges, senior colleges, undergraduate colleges, master's or state colleges, and doctor's colleges or universities. In both of these cases what has happened is specialization, and this should not suprise us.

With respect to graduate work, the traditional master's and doctor's degrees have continued, but more recently the intermediate status of Candidate in Philosophy, or Master of Philosophy, or Specialist has become recognized, and this seems to me to be useful further specialization.

With reference to the graduate programs themselves, it seems to me quite clear that we need to identify much more specifically than we now do on the national basis the distinction between two types of graduate programs - the research-oriented graduate programs leading to the degrees of Master of Arts and Master of Science, Candidate in Philosophy and Doctor of Philosophy; and the practice-oriented programs leading to such degrees as the Master of Social Work, Master of Business Administration, Master of Librarianship, as well as, of course, the Doctor of Medicine, Doctor of Dentistry and Doctor of Law which are the traditional practitioner doctor's degrees.

It seems to me that the Doctor of Arts degree program should be included among these practitioner degree programs. Basically, the Doctor of Arts' student is preparing himself for a career in the practice of college teaching, that is, the practice of utilizing existing knowledge, and thus not devoting himself particularly to the advancement of knowledge, which is the primary objective associated with Doctor of Philosophy degree programs.

The nature of the Doctor of Arts programs in the more specific sense has been already discussed, and thus my comments will be merely complementary to this prior substance, and especially in relation to our recent experience at the University of Washington.

Firstly, we have been quite astonished at the extent of student interest manifested at the University of Washington in relation to the proposed Doctor of Arts program in the field of Germanics, and indeed perhaps a dozen students who are now admitted and active in our Ph.D. program in Germanics have indicated their interest in going forward and completing their work in the Doctor of Arts program. In general, it strikes me that if Doctor of Arts programs are not able to attract bright students then such programs shouldn't even begin. Our experience up to now is that there is very substantial student interest. Indeed, a preliminary announcement on a national basis of the possible availability of Doctor of Arts programs at the University of Washington has stimulated some 50 letters of inquiry over the last month or two.

Secondly, we think of the Doctor of Arts degree as a natural extension of the Master's degree and the Candidate's degree. Thus when the person interested in this activity beyond the Master's degree completes his General Examinations, we will identify him as the Candidate in Arts, and then there will then remain for him to complete only his Internship and Dissertation and Final Examination to win the award of the Doctor of Arts degree.

Thirdly, the breadth of knowledge and experience in the field, or related fields required in the Doctor of Arts programs we feel to be a significant difference from the depth required in Ph.D. programs in order to provide a proper background for a real research advance. Here then is one of the primary differences between the Ph.D. and the D.A. program. It may well turn out that this breadth is useful not only in helping to yield excellence in undergraduate teaching, but also in providing a basis for understanding and suggesting solutions for some of the great social problems which now confront us. Somehow we must encourage better understanding and consideration in undergraduates of the "big picture" of our society.

Next comes the matter of research experience. Certainly we must arrange affairs so that the Doctor of Arts student does understand something about the quality of evidence. Somehow this must be communicated or generated instinctively as well as rationally within the mind of the individual.

Fifthly, it is expected the Doctor of Arts student will be able to follow the literature in his particular field, to identify and understand new achievements, and to learn how to apply these to college teaching in his particular discipline. In every one of these cases he must somehow be brought to understand what is meant by the quality of evidence.

The sixth element is the dissertation. At the University of Washington our feeling is that this should not necessarily embody a contribution to the advance of knowledge, but instead should usually comprise a bringing together of existing knowledge in such a way that the result comprises a substantial contribution to the advancement of the effectiveness of college teaching.

The seventh matter is the internship. It is expected that the Doctor of Arts student will serve as an intern under the guidance of a senior teacher at an institution other than his own, and perhaps on a part-time basis simultaneously with the carrying forward and completing his dissertation. The dissertation may often turn out to be derived from the internship experience. At the same time, it is hoped that the graduate student can be paid on a part-time basis for his services while he is an intern. By this means he will receive assistance in meeting the cost of his graduate experience.

Finally, continuing education will be pertinent for the Doctor of Arts teacher. He as well as almost all professionals in our society, will need to interchange and refresh knowledge in his field from time to time with peers in his field so as to preserve his capabilities and enthusiasm for college teaching.

The particular situation with respect to D.A. programs at the University of Washington, is as follows. A general policy statement has been agreed upon by the graduate faculty and published within the University. Two formal proposals have been recieved in the Graduate School office, one from the faculty in Germanics, and the other in Chemistry. The internal review of Germanics proposal has been completed and will soon be before the President and the Regents of the University, and also the Council on Higher Education. The review of the Chemistry proposal is just beginning. Other proposals for Doctor of Arts programs are being prepared by the faculty in Physics, English, History and Biology. The Biology program will be interdepartmental in that the faculty will consist of certain professors from the Departments of Botany, Zoology, Genetics, and other fields.

In conclusion, may I record that I believe that the Doctor of Arts degree will prove to be a real step forward in that it will provide for recognition of excellence in professional preparation for the practice of teaching, and thereby will complement the Doctor of Philosophy in its recognition for preparation for research activities.

Broadly trained college teachers are urgently needed by our society, and thus I hope that it will be possible soon to bring into being considerable number of top quality Doctor of Arts programs in the United States.

A CANADIAN VIEW ON THE CHANGING DEMAND

A. G. McCalla
University of Alberta
Edmonton, Alberta
Canada

Sometimes I am forced to conclude that society at large tends to consider graduate education and the products of graduate education as luxuries. In affluent times, Graduate Schools are supported and graduates from these schools hired. In times of stringency, however, parts of society talk as if we can't afford these expensive parts of our educational system and they must be curtailed in order that the university can get on with its primary function--educating undergraduates. I know that this is a gross exaggeration, but we in Canada are in a period of stringency right now and over and over again we hear suggestions that graduate education and Ph.D.'s are luxuries we really cannot afford.

On the other hand, if the conclusions from serious appraisals of the factors that determine economic growth and stability are at all valid, this "luxury" philosophy is entirely wrong. The Economic Council of Canada, a few years ago, attributed the significantly lower standards in Canada at least partially to the much less extensive use made of highly educated people in management in Canada as compared with the United States. It was concluded that we need far more of these highly educated people in business and industry if we are to realize anything like our real potential.

Let us first consider the demands in the field of education.

Reports submitted to the meeting of the Council of Graduate Schools held in Dallas in 1962 indicated that there were far too few Ph.D. graduates available to fill university positions in many disciplines. This was certainly also true in Canada. The situation has changed dramatically in the last eight years and, in many disciplines, departments can now be much more selective in appointments. This means that applicants for these university positions can no longer expect to have such a large number of offers from which to choose, nor can they expect to dictate the specific conditions under which they are prepared to work. In other words, the expectations of many of those who have finished graduate school must be modified.

In Canada, it has been somewhat unusual for Junior Colleges to be staffed with instructors who hold the Ph.D. A few of the senior staff may hold this degree but for most appointees, the master's degree is the highest obtained. It seems likely that this situation will change and that there will be greater demand for instructors to have higher qualifications. Junior College systems are not particularly extensive yet in Canada, but there is a distinct trend towards them in some provinces.

Similarly, there is a rapidly developing system of Community Colleges and Technical Institutions which offer post-secondary education but do not award degrees. In the past, it has been the rule that most of the instructors in such colleges were not highly educated graduates. I think none of us expect that the staffs of such institutions should all hold doctoral degrees but we foresee a marked upgrading in the educational level of staff members with far more of them holding graduate degrees.

The secondary school systems are also demanding more highly educated personnel. Not many years ago, the superintendent of a large urban school system was almost certain to have been promoted from the teaching ranks. He had experience in administration, as a principal, but frequently no special university education designed primarily to prepare him for his much more demanding administrative duties as superintendent. Today, this has changed drastically, and specialized education, as well as experience, is considered essential for senior administrative personnel. Increasing numbers and proportions of teachers also have advanced degrees, including some with double master's degrees or doctoral degrees. I shall have something to say later concerning the suitability of graduate programs for people who will eventually find their way into positions in these various levels of the educational system.

In many disciplines government has been a major employer of highly educated personnel, particularly in research positions. Today there is essentially a freeze in the hiring of such personnel but the importance of this type of demand remains. There is a significant change in the approach to problems in many areas with departments which have been primarily concerned with research in the physical sciences and engineering now being concerned with the social consequences of such research and developments. An excellent example is in the field of water resource research. Most of the research in this field has concerned itself with the physical supply of water, use for power or for irrigation. A dam was built to increase power production but little attention was paid to the social consequences that might result. At present, however, concern is being expressed that research in this field is so largely engineering in aspect, and government agencies are recognizing that economic and social aspects of water resource development are of great importance.

Undoubtedly the greatest difference between the situations in Canada and the United States in relation to the demand for graduates from Graduate Schools is in industry. A distressingly small number of such graduates find their way into business and industry in Canada. All too often the major research activity of such industry is carried out in your country and not in Canada. Many of our highly qualified scientists and engineers find their employment in the United States, especially in research laboratories. Some of them remain in Canada in management and operations but the demand is far below that which one would expect from the size of the operations. Unfortunately, we don't see much liklihood of immediate major change in this demand, nor does this situation represent any real change from the past.

More and more it seems to some of us that graduate education differing extensively from the traditional Ph.D. is likely to be in demand. Already the M.Phil. as a teaching, rather than research, degree has been established at some Candian universities. It seems, however, to be essentially the doctorate without thesis, rather than a basically new type of degree.

Our Academic Planning Committee has proposed that we should consider advanced programs designed to produce "generalists" rather than specialists because we believe that there is a growing demand for people who have more than a four-year bachelor's degree but for whom the traditional doctorate or even most master's programs may be unsuitable. These people require more of a multidiscipline type of education than is generally offered today. Perhaps one of the reasons there has not been a greater demand for the products of our Graduate Schools by business and industry is that their education has been directed along lines not especially suitable for business and industry. This is claimed by some business and industrial leaders. No decisions have yet been made concerning possible programs for these purposes but many of us feel sure that developments of this kind will take place. We propose to investigate various combinations of technical and social science programs with the hope that we can meet the type of demand I mentioned for personnel in water resources research.

Similarly, we will look at the special needs of these people who plan to be involved in the educational process at all levels. It seems doubtful that all such people must be certified teachers. It is quite possible I think that, for some types of positions, more suitable programs of study can be devised, even though the requirement for teacher certification is likely to be retained for all elementary and secondary school teachers. Let me state here that, in my opinion, some Faculties of Education are already providing better generalist education than are some other professional faculties, and these other faculties could profit from some of these developments. It seems clear that anyone teaching at any level will be helped by an introduction to effective teaching approaches and to the most effective use of teaching aids. Thus the "generalist" aspect of advanced education for those who want to teach at university might well include some exposure to these topics. I am aware that such exposure is possible at some of your member institutions, but it certainly is not common at Canadian universities.

Universities have been accused of being reactionary in their thinking about changes in degree programs, and of preparing their students for yesterday's problems. I believe that we must pay far more attention than we have been doing to challenging the student to prepare himself to adapt quickly to changing conditions and demands. We can't foresee what all the changes will require but we must try to impress upon our students, particularly those in Graduate Schools, that they must expect these changes and they must be ready to adjust to meet them.

It is more difficult to train a generalist than a specialist, e.g., a molecular biologist needs the equivalent training of a chemist and a physicist plus being a biologist.

FIFTH GENERAL SESSION

12 p.m. Tuesday, 3 March 1970

BUSINESS MEETING
George P. Springer, President, Presiding

1. It was moved, seconded and carried to approve the minutes of the Eleventh Annual Meeting as published in the Proceedings.

2. It was moved, seconded and carried to approve the Treasurer's report showing receipts of $1505.05, expenditures of $2474.26 and a cash balance December 31, 1969, of $1354.91. Refer to Appendix A for the full report.

3. It was moved, seconded and carried to approve the following meeting places of the Association:

   1971 - Newporter Inn, Newport Beach, California
   1972 - Phoenix, Arizona

4. It was moved, seconded and carried to approve the following resolutions proposed by the Resolutions Committee which consisted of Thomas O'Brien, Chairman, Lincoln Moses and Leonard Kent:

   I. *WHEREAS* the 1970 meeting of the WAGS was held in Seattle, Washington, March 1-3, with the University of Washington as host institution,
   NOW THEREFORE BE IT RESOLVED that we express our appreciation to the Committee on Local Arrangements composed of Dean Joseph McCarthy, University of Washington, Chairman; Dean Louis Gaffney, S.J., Seattle University, Dean Richard Moe, Pacific Lutheran University, Dean Richard Nevé, Central Washington State College, and Dean Alan Ross, Western Washington State College.

   II. *WHEREAS* the program of the 1970 session of the Association has provided the opportunity for discussion of topics, of urgent and long-range concern to those attending,
   NOW THEREFORE BE IT RESOLVED that we express an appreciation to the program committee,
   AND FURTHER BE IT RESOLVED that we express our appreciation to those members of the Association, and especially to those

participants who are not members, who gave of their time, effort, and insight to contribute to the work of the Association and its members in the strengthening of graduate education.

III. *WHEREAS* the facilities of the Olympic Hotel have been made available to the Western Association of Graduate Schools at its Twelfth Annual Meeting and the staff has been courteous and helpful,
BE IT THEREFORE RESOLVED that the secretary be instructed to relay to the Olympic Hotel management and staff the appreciation and gratitude for all services rendered.

IV. *WHEREAS* representatives of the Federal, State and Private agencies contribute much to the WAGS meeting by giving freely of their time, energy, and knowledge,
BE IT THEREFORE RESOLVED, that the members of WAGS express their sincere appreciation to the individuals and to their agencies.

V. *WHEREAS* the relation of WAGS and WICHE has always been a cooperative, fruitful and tangible one,
NOW THEREFORE BE IT RESOLVED that the WAGS direct its Committee on Graduate Education of Ethnic Minority Groups to continue its cooperation with WICHE to study the feasibility of organizing a consortium of its member graduate schools to deal with the problems of graduate education of ethnic minorities on a regional basis and further that the committee be directed to report its findings to the WAGS at the earliest feasible time. Further, that the WAGS committee expand its studies to place stronger emphasis on the American Indian and Asiatic American and recommend ways of achieving an appropriate ethnic mix among students and faculty in graduate programs and to recommend other ways of providing appropriate graduate education for the minority students of the West. Further that WAGS once again express its appreciation and gratitude to WICHE for its tangible financial support of the special Committee on Graduate Education of Ethnic Minorities during the past year, and to urge WICHE to continue its support of the Committee, and to urge WICHE to expand its activities and commitments in the general area of minority education and ethnic studies programs.

VI. *WHEREAS* the annual dinner of WAGS is supplemented by appropriate entertainment,
NOW THEREFORE BE IT RESOLVED that the membership express its appreciation of those students from the University of Washington who so graciously and skillfully presented their native art forms.

5. It was moved, seconded and carried unanimously to approve the following new members of the Association recommended by the Executive Committee:

   California State Polytechnic College
   Kellogg-Voorhis; Pomona, California

   California State College
   Hayward, California

   California State College
   Dominguez Hills, California

   California State Polytechnic College
   San Luis Obispo, California

6. It was moved, seconded and carried to cast a unanimous ballot for election of the following officers of the Association presented by the Executive Committee:

   President: Philip M. Rice, Claremont Graduate School
   President-Elect: William Burke, Arizona State University
   Member-at-Large of the Executive Committee for a term to end at the annual meeting in 1972: Harold F. Ryan, Loyola University of Los Angeles

7. It was moved, seconded and carried to raise the dues of the Association to $35 per year payable 1 July of each year.

   It was announced that the Executive Committee has authorized the local arrangements committee to collect a $3 registration fee to help defray costs of the annual meetings.

8. The new officers of the Association were duly installed and President Philip M. Rice received the gavel.

Meeting adjourned at 1 p.m.

CONSTITUTION
# of the
WESTERN ASSOCIATION OF GRADUATE SCHOOLS

Article I. NAME

The name of this organization shall be THE WESTERN ASSOCIATION OF GRADUATE SCHOOLS.

Article II. FUNCTIONS

Section 1. *Graduate Study*. The ASSOCIATION shall have as a primary purpose the consideration of mutual problems among the member institutions relating to graduate study and research. It will cooperate with other agencies for this purpose by dissemination of information, imporvement of standards, encouragement of research, and assistance to institutions embarking upon graduate programs. The ASSOCIATION shall function in liaison with other national and regional educational bodies and may serve as a representative on graduate affairs for the institutional members.

Section 2. *Academic Standards*. The ASSOCIATION will take continuous interest in the activities of other bodies which concern themselves with the standards of graduate work. The ASSOCIATION shall not assume the role of an accreditation agency.

Section 3. *Special Studies*. Studies in graduate education may be undertaken by the ASSOCIATION upon authorization of the membership or the ASSOCIATION may designate other organizations to conduct studies for it under its supervision.

Section 4. *Binding Actions*. Although the ASSOCIATION may be regarded as a representative and spokesman of its constituent members, no action taken by the ASSOCIATION or any of its representatives is to be regarded as binding upon any institutional member, except for such dues as may be fully approved as provided hereafter.

Article III. MEMBERSHIP AND DUES

Section 1. *Membership* Membership in the ASSOCIATION shall be by institution.

a. Membership shall consist of institutions in the states of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming and the Canadian provinces of British Columbia, Alberta, Saskatchewan and Yukon. Institutions to be eligible must have a formally organized administrative unit responsible for work leading to advanced degrees above the baccalaureate in more than one area of academic endeavor, and this work must be regularly available during the academic year. Any eligible institution having regional or professional accredited status by agencies acceptable to the ASSOCIATION, and now offering graduate degrees, may apply for membership.

b. The Executive Committee of this ASSOCIATION shall consider such applications and if its judgment is favorable shall recommend admission to the ASSOCIATION for final action. Membership shall be completed by the payment of the regular institutional dues.

Section 2. *Dues.* Dues shall be collected on an institutional basis. Unless otherwise ordered by the membership at an annual meeting:

a. The dues shall be thirty-five dollars ($35.00) annually;

b. Dues are payable to the Secretary-Treasurer.
(The fiscal year begins July 1 each year.)

Article IV. MEETINGS

Section 1. *Annual Meeting.* There shall be an annual meeting of representatives of the institutional members, to be held at a time and place designated by the Executive Committee.

Section 2. *Special Meetings.* Special meetings may be authorized by the Executive Committee after a poll of the representatives of the members of this ASSOCIATION.

Section 3. *Voting.* Voting shall be by institution. Each institution shall have one vote.

Article V. ORGANIZATION

Section 1. *Powers.* Policy actions or general statements affecting the ASSOCIATION as a whole shall be valid only when approved by a majority of the institutions represented in the regular annual business meeting, or by a majority of the institutions represented responding to a mail ballot. A simple majority of institutional membership shall constitute a quorum. Other powers may be delegated by the representatives as they see fit, except for duties specifically designated hereafter.

Section 2. *Officers.* Newly elected officers shall be installed at the close of the annual business meeting.

a. The President shall be elected at the annual meeting for a term of one year. He shall be responsible for coordinating all functions of the ASSOCIATION, and shall preside at the annual meeting. He shall serve as chairman of the Executive Committee and perform the usual duties of a presiding officer.

b. The President-Elect shall be elected for a period of two years, the first year of which he shall serve as a replacement for the President in the event of the latter's inability to serve, and as President during the second year of his period of office.

c. The Secretary-Treasurer shall be elected for a term of three years at the annual meeting when the previous term expires or is vacated. He shall be responsible for notices of dues, announcement of all meetings, and for conducting mail ballots. He shall collect and disburse all monies of the ASSOCIATION, and keep full and accurate records of such transactions. He shall maintain the official record of institutional membership and the designated representative of each. The Secretary-Treasurer shall be reimbursed for the ordinary and reasonable expenditures involved in carrying out his prescribed duties.

d. The Executive Committee shall make an *ad interim* appointment to fill a vacated office until the next regular meeting of the ASSOCIATION.

Section 3. *Committees.*

a. The Executive Committee shall be composed of six members as follows: the President of the ASSOCIATION, the President-Elect, the Secretary-Treasurer, the immediate Past President and two members-at-large elected at the annual meeting for a period of two years. At the initial meeting of the ASSOCIATION, and later times when replacements are needed, individuals if necessary, may be elected for one year in order that the terms of the members-at-large may be staggered so that normally one individual will be elected for a two-year term at each annual meeting of the ASSOCIATION. The Executive Committee shall act for the ASSOCIATION between meetings on all but policy or general statement matters which are reserved for the official representatives. It shall act as a nominating committee, a program committee, and in general represent the ASSOCIATION, but the Chair shall call for nominations from the floor prior to election at any regular meeting of the ASSOCIATION. The Executive Committee may authorize minor expenditures incidental to the general functions of the ASSOCIATION and take other actions necessary for the operations of the ASSOCIATION. It shall assume the function of liaison with other professional and educational organizations. With the advice of the Executive Committee, the President may request other representatives to the ASSOCIATION to perform functions relating to local arrangements, the program, etc., as he deems proper.

b. *Ad hoc* committees may be appointed by the President of the ASSOCIATION as necessary, the term of such committees to expire with the term of the appointing President, or with the conclusion of the committee's assignment, whichever occurs first.

Article VI. ADOPTION OF CONSTITUTION AND AMMENDMENTS

Section 1. *Adoption.* The Constitution of the ASSOCIATION shall become effective for each institution upon approval by its official representative at the organization meeting or within six months thereafter.

Section 2. *Amendments.* Following adoption of the Constitution, proposed amendments thereto must be submitted in writing to the Executive Committee, and by it be made available for consideration by all member institutions at least two months in advance of a formal vote at the annual meeting. A majority of two-thirds of the member institutions is required to adopt such amendment. In the case of insufficient representation at the annual meeting a subsequent mail vote from all member institutions may be conducted by the Executive Committee.

March, 1970

APPENDIX A

WESTERN ASSOCIATION OF GRADUATE SCHOOLS
Twelfth Annual Meeting
Seattle, Washington March 3, 1970

TREASURER'S REPORT AS OF DECEMBER 31, 1969

CASH BALANCE report of December 31, 1968			$2324.12
RECEIPTS:			
1969-70 Dues		$1480.00	
Interest on Savings to December 31, 1969		25.05	
Total Receipts			1505.05
TOTAL FUNDS			$3829.17
EXPENDITURES:			
Supplies and Postage		45.75	
Travel Expenses for WAGS representative at Inauguration of President at Utah State Univ.		27.50	
Personal Services		107.00	
Annual Meeting:			
Graduate students' meals, travel, honoraria for participating	$497.75		
Travel expenses for panelist	210.90		
Travel expenses for WAGS President	245.20		
Printing of programs	108.32		
Typing and mailing of material for meeting	41.72		
Refreshments and entertainment	206.84		
Recording and transcribing tapes of meeting	100.00		
TOTAL ANNUAL MEETING		1410.73	
Proceedings:			
Typing	53.30		
Printing and mailing	210.20		
TOTAL PROCEEDINGS		263.50	
Travel Expenses for Association officers		619.78	
Total Expenses			2474.26
ENDING CASH BALANCE December 31, 1969			$1354.91

SAVINGS ACCOUNT BALANCE	$546.77
CHECKING ACCOUNT BALANCE	$808.14